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SCI-TECH NEWS

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OF THE
SCIENCE-TECHNOLOGY
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SPECIAL
LIBRARIES
ASSOCIATION

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Volume 15 — No. 2

Summer 1961

WILEY BOOKS

CYBERNETICS, or Control and Communication in the Animal and the Machine, Second Edition

By NORBERT WIENER, M.I.T. This famous speculative work has now been revised to include a new introduction and two new chapters. **An M.I.T. Press Book. 1961. 212 pages. $6.50.**

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Fundamentals of Dynamical Astronomy and Space Flight.
By ARTHUR I. BERMAN, Hartford Graduate Center, Rensselaer Polytechnic Institute. A thorough exposition of principles of astronautics containing many problems illustrative of ideas developed in a text. **1961. 350 pages. $9.25.***

MEDICINAL CHEMISTRY, Volume V

Edited by WALTER H. HARTUNG, Medical College of Virginia, and ERNEST E. CAMPAIGNE, University of Indiana. The fifth in a series of reviews prepared under the auspices of Division of Medicine Chemistry of The American Chemical Society. **1961. Approx. 400 pages. Prob. $17.50.**

The FIRE of LIFE

By MAX KLEIBER, University of California, Davis. An introduction to animal energy intended to familiarize the reader with fundamental concepts (i.e., heat, chemical energy, etc.) and basic relationships (e. g., that between rate of heat production and environment temperature). **1961. Approx. 400 pages. Prob. $10.00.***

TRANSISTOR LOGIC CIRCUITS

By RICHARD B. HURLEY, International Business Machines, San Jose, California. The first book to cover **both** logical mathematics, logical routines and blocks, **and** the transistor circuits that implements the mathematics and blocks in a thorough manner. **1961. 363 pages. $10.00.***

FLUID MECHANICS

By RICHARD H. F. PAO, Rose Polytechnic Institute. A unified presentation of the fundamentals and physical phenomena of fluid flows. Mathematical derivations worked out in detail. **1961. Approx. 520 pages. Prob. $8.50.**

BALLISTIC MISSILE and SPACE VEHICLE SYSTEMS

Edited by HOWARD S. SEIFERT, Stanford University and United Technlogy Corp., and KENNETH BROWN, John Wiley & Sons, Inc. With the focus on engineering problems, this book presents not only fundamental laws of propulsion, trajectories, structures, etc., but also the "interface" problems caused by coupling two or more sub-systems. **1961. Approx. 450 pages. Prob. $12.00.**

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By CHARLES TANFORD, Duke University. Presents fundamental theories in the major areas of physical chemistry and shows how theories may be modified or extended to become applicable to molecules of very high molecular weight. **1961. Approx. 752 pages. Prob. $18.00.***

ON ELECTRODE PROCESSES TRANSACTIONS OF THE SYMPOSIUM

Edited by ERNEST YEAGER, Western Reserve University. Includes papers presented at a symposium sponsored by the Electrochemical Society and represents the first time that the work of so many internationally distinguished electrochemists has been offered in one publication. **1961. Approx. 484 pages. Prob. $20.00.**

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GUEST EDITORIAL

Recruitment — The Recurring Question

By Charles C. Weddington
Indiana University School of Library Science

Considerable interest is expressed both in professional literature and in formal and informal meetings on the need for recruiting more Special Librarians. Brochures are conceived and produced; articles appear in the professional journals. However, it is questionable that the opportunities in our field are brought to the awareness of the proper audience.

Less emphasis should be placed on trying to find recruits from the ranks of subject specialists with advanced degrees. The following points will serve to underline this statement:

a. Growth of knowledge in the different fields of science has led to more and more specialization of the respective fields, and today one person cannot possibly be a subject specialist in every subfield.
b. It is unrealistic to expect a full-fledged subject specialist with either an M.S. or a Ph.D. to continue in school to obtain an advanced degree in library science. J. C. Rather* has found that subject knowledge is not a major qualification for special librarians, and that most subject specialists have worked in other types of library specializations during their careers.

Logically then, recruitment should be carried to the under-graduate science major. This can be done on two levels:

1. Seniors should be made aware of the job opportunities in the field of special librarianship and should be encouraged to continue their education by obtaining a Master's degree in Library Science.
2. Encouragement should be given to freshmen, sophomores, and juniors to pursue a degree in science with a career in the literature rather than the laboratory of their respective discipline.

More stress should be placed not only on the fact that many jobs are available in the special library field but also on the different kinds of opportunities which exist within our profession today. A librarian can build a career in administration, technical services ,reference and/or documentation. There is a real challenge for every librarian in the latter field as information retrieval becomes more and more important in all fields of knowledge. Machine retrieval is becoming or is already a reality. These are some of the aspects of librarianship that should be brought home to the undergraduate by competent and enthusiastic people in the field.

Recruitment is made by personal contact; it is not enough if the very competent recruiting material gets to the Library Schools. The Library Schools, their faculties and student bodies, know about these opportunities in the field of special librarianship, but do the students in the different fields of science?
*Rather, John Carson. Science, Technical Libraries and the Education of Special Librarians. Part II. The Education of Special Librarians for Technical Libraries. Education for Special Librarianship. Philadelphia Drexel Institute of Technology, 1959. p. 22.

GUEST EDITORIAL

What's In A Name?

One of my friends at work, a procedures analyst, became interested in the overall problems of technical information. He recently visited a large chemical firm in the east where extraordinary advances in the handling of information are beng made. He was introduced to the Manager of Technical Information Systems Operation who, upon learning why his caller had come, asked him, "Are you a librarian?". "No." my friend answered. "Good," said the Manager, "we can speak freely!".

This may be why many librarians find it politic to navigate the shoals of commerce under a marvelous spectrum of colors. "Research Information Specialist", "Information Analyst", "Literature Analyzer", "Supervisor-Technical Information Center" and "Manager-Research Information Unit" are typical examples. These titles fairly scintillate — they have ZING! In emotional impact they compare favorably with STUTZ BEARCAT or SPLIT-LEVEL.

It may well be that all of these titles are apt, appropriate and entirely fitting in the fast paced whirl of business but I have some doubts. I know that were I introduced to the manager mentioned above as a "Technical Information Specialists" rather than as "Reference Librarian" — my actual title — we would stand a better chance of — how shall I put it — speaking freely. But it would give me, withal, a queasy feeling.

The Great Schism between the Documentalists, the Operators Research types (and. God wot, the Data Processing people) and we ordinary garden-variety "traditional librarians" is at best unfortunate. A step in the right direction they tell me, would be for us to at least be fluent in the jargon of of the 704 crowd. A liberal sprinkling of such terms as "tensorize", "vectorize", "imput-output", and "machine time" in your colloquies should serve to put you at ease with all but a Norbert Wiener.

The rewards of such brinksmanship may be great indeed. but even John Foster Dulles had his limits. When the chips are down let's call a spade a spade. Will everyone please repeat after me? "A librarian IS a librarian IS a librarian!".

—Bill Condon
GE, ANP Dept.
Cincinnati, Ohio

The 1961 SLA Convention is history: to be punched away in our hole filled memories as partially informative, partially tedious, and partially hilarious. The highlights would be the spontaneous hospitality of the San Francisco Chapter, the speeches of Drs. Hayakawa and Powell, and the many contacts and idea exchanging with interesting people from all over our wonderful country. For those who couldn't come — we missed you. For both categories — we hope to see you in D.C. in 1962.
*See Letters to the Editor by Mike O. Friedlander.

WHAT WOULD YOU DO?

Queston: Is there an inexpensive portable microflim outfit available?

Editor: The question is ambiguous, but hear this. I bought a Contaflex 35mm single lens reflex, 6 year old camera for $35.00 and attached a No. 3 portrait lens for $2.00. A better deal is to buy a No. 1 & a No. 2 for more adaptability and the combination of No. 1 & No. 2 make a No. 3. This camera allows you to see the exact field and to make a sharp focus. A lesser expensive stand with a three way adjustment is the ROWI, listing at $34.95 but haggling at around $27.00. It will come apart and may fit in your brief case, without too much sticking out. With 2 clamp lights ($5.00 for the sockets & $4.00 for the bulbs — PH 375/34R4) at a 45 degree angle to and 2 feet from the field, you are in business. A light meter and a cable release are handy to have. Usually F8 to 11 at a 100th with cut the mustard. If your copy is sour, get professional help. I have a take-up gadget that allows me to remove the exposed film from the camera before all the 36 exposures have been taken — it exposes & wastes about three frames.

With this outfit I can march into any reference library and carry off as much bibliographic loot as I have film for. I try to push off the film to the customer (3 cents a frame); if he rebels, we enlarge to 8 x 10 and print them for 6 cents more each. Is this inexpensive?*

*Demonstration of Bennett's Law No. 2: Anyone who has done anything successfully once, immediately becomes an expert.

The Editor would like to remind you that the deadline for the Fall issue material is Sept. 1st; Winter issue is Dec. 15th. Please send material to his home address.

FROM

SCI-TECH'S CHAIRMAN

MARGARET ANDERSON

I imagine every Sci-Tech Chairman, as he begins his term ,feels that the coming year will be the most critical in the history of the Division. Each year the Division grows larger and more important, more projects are undertaken and completed, and each chairman manages to survive. I trust it will be so this year.

Naturally, the Division can only be as strong as its members make it. The members can be strong only if they know what is going on in the Division and Sections, and are vocal in approval of, or dissent with, present activities. Not only do the members need to be articulate, because after all the officers are not clairvoyant, but they need to be active. A good percentage of you can be vocal, as demonstrated by the returns to the questionnaire distributed by the Committee on Division and Section Structure, but more of you could be active. I recommend that you read carefully the minutes of the San Francisco business meeting and the reports that were presented there.

The report of the Committee on Division and Section Structure should be thoughtfully perused by every member interested in the future not only of the Division, but of the Association. The Committee (Lois Godfrey, Bertha Allen, and Helen Redmond) has done a marvelous job of synthesizing the replies to its questionnaire. Because the results require continued study, the Committee will operate this year under the chairmanship of Bertha Allen.

Thanks to the diligent work of Lois Brock, the Division Officers now have a handbook of precedures to guide their operations. Lois is certainly to be commended for an excellent job. With the completion of this project we have combined the By-Laws and Procedures Committees.

As you know, there has been some discussion with the SLA Executive Board regarding future publication plans for **Scientific Meetings,** but no decision has been made. It is important that this worthwhile publication be continued. We are indeed fortunate that its editor and business manager have agreed to continue until a decision has been made; a committee is now being appointed to investigate possible means of its continued publication. Meanwhile, the collection of information on future meetings requires a tremendous amount of work. Here is an opportunity for sincere volunteers to participate in a valuable project. Write to Gertrude Bloomer and inquire how you can help continue this useful reference tool.

If we were to ask Frank Bennett, I'm sure he would agree that each of the regular departments of **Sci-Tech News** could benefit by your help. If that is a section that appeals to you, such as the Bibliography Digest, Sci-Tech Serials, etc., volunteer to help by making yourself known to the compiler. Incidentally, membership of the Committees has not yet been completed. Let me know if you would like to serve the Division in this way.

I really didn't intend to make this a pep talk because Herb White's annual report certainly should be an inspiration to all of us. But I hope you get the message—the Division and Sections Officers do need your help and advice. Let us hear from you.

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IF IT'S A TECHNICAL BOOK AND IN PRINT— WE HAVE IT OR WE'LL GET IT

THE VALUE OF A LIBRARY TO MANAGEMENT

By Robert L. Wehrli, Vice President,

Robert Shaw-Fulton Controls Co.

Before discussing the value of a library to management it is necessary to define terms and describe the type of library considered, as well as what is meant by management. For the present case, the term library is applied to a technical reference library equipped to support studies in a limited scientific field. An example would be the company library usually found in research and development organizations. Secondly, the term management is used to signify a collective body of managers having responsibility for financial programs as well as technical progress of the company.

Management must evaluate the library in terms of its contribution to the gains of the company. While, at first, it appears difficult to relate the indirect service to a tangible product or financial gain, an explanation of how a library supports company objectives and operations proves interesting. For example, three major management objectives are: (1) continuing and increasing return to employees; (2) fair and growing dividends to stockholders; and (3) long term stability. These objectives are pursued through efficient application of skilled personnel along certain lines of endeavor. The success achieved is related to the choice of programs, the quality of the tools available, and the experience of the personnel assigned. If, therefore, the influence of the library on these three factors, programs, tools, and personnel, is evaluated, the overall contribution of a library should be evident.

PROGRAMS

Research and development management uses a library to provide background for new company programs, to accumulate information on related and competitive programs and, frequently, as a central recording agency for past and current programs.

If the library is well staffed it can perform the technical and marketing searches which should precede every new R & D venture. If services are limited, it still has ready reference to data pertinent to the company's line of endeavor. The techniques for search developed by the library as well as the contacts with other supporting libraries can save many hours of valuable time and can strengthen any new program by providing a strong information base.

It seems obvious, therefore, that a library's potential contribution to the proper selection of programs is very great.

TOOLS

Whether librarians like it or not, management looks at the library as a service or tool. It is a tool used by trained personnel in the performance of their tasks. In this respect, a library in the hands of a technical department is similar to a gauge in the hands of a mechanic.

Management also is a service or tool. Like a library, management fills a service need for an organization of trained personnel.

PERSONNEL

It was mentioned earlier that the success of the company is dependent upon the efficient application of skilled and experienced personnel. Since the library supports company personnel directly, it is intimately linked to the company success.

A library is akin to experience because it offers the experience of others. It will never replace direct experience. It does supplement the experience of personnel by opening up to them the plans, the work, and the results of their predecessors.

In these days of critical personnel shortage, this experience factor is vital. The demands for technical manpower are great and available experience in any technical field is being spread very thin. The library, in raising the effective experience level of company personnel makes it possible to save time on all programs and to reach a level of technical achievement, which otherwise would be unobtainable.

From a dollar and cents standpoint the library, in its aid to personnel role, measures well. Assume for example, that the average experience level in an organization of one hundred technical people can be raised from four years to six years with the help of a library. In order to achieve the same higher average through the replacement of inexperienced personnel with personnel having two to three years more experience it would require an additional operating expenditure of approximately $100 per man per month. This would result in an increase in labor costs of $120,000 per year. Obviously, this is many times the cost of a two or three librarian unit which could service the technical department of our example.

A library is akin to experience because it offers the experience of others. Stress for a moment the word "offers." A library is worth nothing if this offer isn't accepted. The library must sell itself; it must sell its service to personnel. The library has to have a great deal of information, good information, available and it has to be able to provide it quickly in order that personnel use it. If there is a delay from when the information is needed until when it is received, quite frequently the technical man needing the library services will drift off and take another approach to the problem or look for a solution elsewhere. While he is waiting for this information he is wasting time. If he could get it quickly, he could channel his efforts elsewhere for this period of time and be much more productive. So the information has to be complete and it has to be provided quickly.

The idea of the use of machines, not to replace libraries but to help librarians has been introduced in the play, "The Desk Set": The library profession may be neglecting a real good bet. The orderly thinking of a librarian coupled with the storage and scanning capacity of a machine should be able to increase the effectiveness of our libraries manifold. Certainly the information that has to be stored and recalled in library service is much greater than the information that has to be stored and recalled in accounting, yet the accounting people are using machines and librarians are not. Technical personnel will never be able to go to a machine to get library service. But trained librarians can speed up the availability of information through the use of machines. Perhaps they can't do it now, but the future holds promise for machines to help them in their work.

ALL ABOUT POLYMORPHICS

EDITOR'S NOTE: This is a transcript of the sound track of Ramo-Wooldridge movie in color entitled "All About Polymorphics" by Dr. John M. Salzer. The movie is a delightful delineation of an abstract idea into reality by using many colored wood blocks which move hither and yon to put over points. Naturally, you will have to use your imagination.

This film is about an idea — an idea we call the polymorphic concept of data processing system design. Which is a complicated name for an idea, we admit. But the idea itself isn't so complicated when you think of it in terms of how people get machines to help solve their problems.

Now, if you have a problem to be computed . . .

You take it to a computer.

And as your problems get bigger . . .

You need a bigger computer.

As more and more guys like you have problems to solve, they take turns on the computer. Which isn't so bad if the computer is fast enough. Which it can be if it is big enough and expensive enough.

But — as the number of guys and the number of problems increase . . .

The machine gets HUGE!

Isn't that a waste, because while one guy is using the computer to solve an easy problem — which may only be taking one-thousandth of the computer — everyone else has to wait. Unless you spend still more money and buy a still bigger computer.

But worse: if one piece fails, the whole computer will probably quit — even though most of it is perfectly good, ready and willing to work.

What's wrong here?

To start with, if you look inside you see that it isn't just one solid hunk of computer, but a lot of individual parts and circuits which have specialized functions.

Now, it would be nice if someone would divide the huge computer into little parts— unsolder the connection — so that everybody could get a chance to use the parts he needs for his particular problems.

Next, you will want to ORGANIZE things a little. Not in the usual way, where the brainy computer part not only supervises everything, but also insists on doing a large share of the detail work. What you want is more delegation, — a more easy- going, cooperative relationship between all the parts, so that they can associate freely and directly with one another, and in various ways. Isn't this a lot of fun?

Actually, of course, the electronic boxes don't move. You just make a nice, flexible, automatic switchboard connection — like the telephone company does. That way, the computer boxes — the real brains of the system — don't have to waste their time and talents acting like telephone operators, trying to handle every single message personally. They can stick to computing and let the other boxes do the detail work ,such as remembering large numbers or facts, or sending messages from one box to another, or carrying out simple logical routines. And so, each computer box doesn't have to be so big now.

This is distributed control, distributed memory, distributed arithmetics, distributed everything. And it makes sense, because now more than one guy can be using the system at the same time to solve a number of easy problems. And when those occasional crash problems come along, your system can reconnect itself in a matter of microseconds to get the big, urgent jobs done as well as an ordinary giant computer could do them.

And if one box quits, it's no great catastrophe. The system just automatically switches the job to another box.

If you find yourself getting the busy signal too often, you buy more of exactly the kind of boxes you need. That's like adding on new subscribers as they move in. Or you can add more displays so that more people can see what goes on.

Suppose your problem calls for a lot of detail work to do most of the time. Then you buy boxes to give you all the memory, or messenger service — or whatever else — you need. On the other hand, if your problems are mostly heavy-duty brainwork, you can load your system up with computer boxes.

When you really need it — and can prove you need it — you can put together a big system — or even a really, really big one — without over-investing early, or throwing anything away and starting from scratch again.

So you save money. and all the while you have better reliability and multiple use and better acess.

You can switch together two complexes — or three or four — like a nation-wide telephone system. Or you can connect in one of those ordinary giant computers as a subscriber, if you go for super-systems. And this doesn't mean that you end up with one big party line — you can keep some lines private by opening a few switches permanently, so that certain information won't be available to nosey subscribers.

And so now you see that it wasn't just exactly a computer you wanted — but a group of guys with brains, and a group of boxes with electronic brains, and consoles and displays — all connected together in varying ways and growing together so that the part-

nership can solve more problems per dollar than each group could solve by itself.

And this is all there is to the data processing concept known as polymorphic (many-shaped) — or multiple mode — or the matrix concept — or maybe just the common sense switchboard idea in data processing systems.

Now it just so happens that Thompson Ramo Wooldridge Inc. has been working on the polymorphic idea for several years. And — in case you hadn't already guessed — we have built the first actual polymorphic system. If you're interested, let us know.

HISTORY AND IMPORTANCE OF TECHNICAL REPORTS

By Johanna Tallman

UCLA Engineering Library

Librarians in general are accustomed to handling books, magazines and the type of publications known as government documents. But many librarians are only vaguely aware of the existence and value of a tremendous and rapidly growing body of scientfic and technical literature now given the general term "technical reports". It is estimated that about 100,000 titles of such reports are now being issued each year. The total number of such report titles issued to date is approaching the million mark.

In order to give you a better understanding of the nature of these reports, I want to give you a little of their history. We can actually go back as far as 1915 when Congress created the National Advisory Committee for Aeronautics to study the problems of aeronautical flight. The information gathered through research in the N.A.C.A. laboratories was published in four series of publications of which only one, called **Reports**, was and still is printed and sold by the Superintendent of Documents. The others are mimeographed or offset reproduced and distributed directly by the N.A.C.A.

The real beginning of the present flood of scientific and technical reports came with the rapid expansion of research due to World War II. In June of 1941 the Office of Scientific Research and Development (OSRD) was created by Executive Order. In general its purpose was to develop, initiate and support scientific and medical research as may be required for national defense. One of the subdivisions of the OSRD was the National Defense Research Committee (NDRC) whose purpose was to assist in the mobilization of the scientific personnel and resources of the Nation. It was also to recommend the need for and character of contracts to be entered into with universities, research institutes and industrial laboratories for research and development activities of the Departments of War and Navy. The government agencies which were already doing research could not possibly do all of the research required for the all-out war effort.

The Federal Government's financing of the national research and development expenditures gradually rose to over 50% of the total amount. In addition to research done by non-governmental agencies on contract, a great deal of research was carried on by enlarged or newly created government agencies, particularly Air Force and Navy laboratories, as well as the Atomic Energy Commission. This intensified research activity resulted in a great variety and tremendous volume of reports. There was an urgent need to disseminate the information quickly, to the right people, in order to avoid needless duplication of work. The regular media of transmitting information, such as books and journals, were too slow and required too much final editing and polishing to get the information out. Moreover, many of these reports involved national security and were, therefore, restricted in their availability. Such reports are said to be "classified" and designated as "Confidential", "Restricted", "Secret" or "Top Secret", in ascending order of their security status.

Reports which could be duplicated economically and quickly through nearprint processes in limited numbers could be disseminated on a limited and channeled distribution-basis to persons and agencies which could establish a need-to-know. This resulted in elaborate distribution guides, such as the Standard Aeronautical Indexing System (SAIS) and the Field-of-Interest Register developed by the Armed Services Technical Information Agency (ASTIA). Ordinarily recipients can receive only reports in those fields in which they have specific interests, i.e. similar contracts.

There are, however, many such reports which are available to the general public. These include reports available through the Office of Technical Services (OTS), through the Government Printing Office, the Atomic Energy Commission, the NACA, etc. You will hear more about these later.

Another group of technical reports resulted from the work of teams of Allied specialists who went into Germany and Japan immediately after the close of World War II. These teams had four primary objectives, the first two of of which are of bibliographical interest. These objectives were:

1. To capture enemy documents of a scientific and technical nature which

might be of use to the Allies. This material constitutes a group of literature known as Captured German Documents (CGD). In 1944 the Air Force established the Air Documents Research Center to screen, organize and catalog the fifteen hundred tons of documents and reports of Air Technical interest which were eventually captured. This agency became the Air Documents Division in 1945, the Central Air Documents Office (CADO) in 1948 and merged into the Armed Services Technical Information Agency in 1951.

2. To interrogate German and Japanese scientists, manufacturers, factory personnel, etc., to obtain additional useful data, especially on war-time developments which might not be recorded or obtained in the first objective. These interviews and tours of spection resulted in subsequent reports issued by four agencies called British Intelligence Objectives Sub-Committee (BIOS), Combined Intelligence Objectives Sub-Committee (CIOS), Joint Intelligence Objectives Agency (JIOA) and Field Intelligence Agency, Technical (FIAT).
3. To capture useful equipment and facilities, to be used by the Allies.
4. To capture key scientists.

One of the biggest problems in regard to technical reports is their bibliographical control. How can a scientist in a laboratory in California know what has been done and issued in the many other laboratories working on similar reserach? What bibliographical tools are available to the librarian who must help the scientist find this information?

A number of government agencies have established central documentation services which acquire, index and/or distribute such reports.

The Technical Information Service of the Atomic Energy Commission had its beginning in 1942 when the Metallurgical Laboratory of the University of Chicago established a central indexing service for the Manhattan District, which became the Atomic Energy Commission. Originally all of the material was secret and therefore classified. But gradually it became obvious that much information was of great value to the scientific and technical world not connected with national defense. In 1946 a declassification system was inaugurated to clear such reports as had no more need to be guarded as secrets.

The OSRD by 1946, in the course of terminating its contracts with industrial and research organizations, recalled hundreds of thousands of copies of scientific and technical reports prepared at its instance. Many but not all of these were declassified. The Library of Congress was asked to undertake the work of distribution of these reports in scholarly centers strategicaly located throughout the United States. Sets of classified and unclassified reports were forwarded to various Army and Navy installations and sets of declassified reports were sent to almost one hundred research libraries. Because the number of copies of any individual title varied between one and one hundred, many of the sets distributed were incomplete. Th Library of Congress tried to assemble as complete a set as possible for its own files. Special funds were made available to LC to prepare a catalog of OSRD publications. I will give you more details about this later. The OSRD itself was terminated in December 1947.

The Publication Board was established by Executive Order in 1945 as part of the Department of Commerce. Its purpose was to act as a collecting and distributing agency for unclassified and declassified scientific and technical reports on wartime and postwar research by Federal agencies, cooperating research agencies foreign governmental research agencies, and technical documents captured in enemy countries. In 1946 the name of this agency was changed to Office of Technical Services (OTS), and in 1950 Congress re-defined its function as a clearing house for technical reports useful to American industry and business. It is this emphasis which distinguishes its reports from those handled by the AEC and ASTIA, which are primarily of interest to national defense. Another distinction is that almost all OTS publications (known as PB publications, from the original Publications Board) are for sale at the cost of reproduction, which is often quite high.

In 1946 Congress established the Office of Naval Research (ONR) and gave it the responsibility for "obtaining, coordinating and making available world-wide scientific information to all bureaus and activities of the Department of the Navy." This immediately brought it face to face with the problem of sifting significant information from the thousands of technical reports generated by its contractors. In January 1947 the ONR entered into a contract with the Library of Congress to set up the Science and Technology Project (STP) in the Reference Department of LC. Its essential purpose was to catalog and abstract these reports and to provide loan ,reference and bibliographical services from the reports in its collection. In 1949 the STP was incorporated in a new Science Division and became the Navy Research Section (NRS) in this Division. In 1952 the Library of Congress set up a Technical Infor-

mation Division for the administration of bibliographical programs conducted for and supported by branches of the Department of Defense. The NRS became the nucleus of this new Division. In 1953 the Library's NRS contract was transferred from the ONR to ASTIA and its responsibilities somewhat altered. This will be explained later when you hear more specifically about ASTIA and its operation.

Now we come to another aspect of these reports, their numbering system. When such a report is first issued ,the originating agency gives it a series title and number, which may be simple, such as **Technical Report #3**, or more complex, such as **Division 3, Section H, Series J, no.6.** As it is gathered, indexed and made available through some central coordinating agency, such as the OSRD, OTS, or ASTIA, it is given a new serial number, such as OSRD 2154, PB 19461 or AD 50387. This number then becomes of primary importance in identifying, acquiring or listing the report. Many reports are listed by more than one such agency and therefore acquire several identifying numbers. We will later go more into details about the bibliographical keys and indexes to the various report groups.

Before we go into these details, however, we should mention one more area of general and pertinent interest. This is the extent to which scientific information in such reports subsequently finds its way into conventional technical journals and the length of time this process requires.

The National Science Foundation sponsored a study of publications stemming from defense-related technical reports. A **Final Report** of this study was issued in December 1956 by the Technical Information Division of the Library of Congress. Out of a beginning sampling of 2500 reports, there were 1082 reports whose publication histories were relatively completely established. Of these 1082 reports, 76% were considered to contain publishable information. For 48% of the reports containing such publishable information, all such information was published within two to three years, but for 23% nothing of the publishable data was published within this time period These are generalized statements. The **Final Report** gives much more detailed analyses, but we can draw the general conclusion that much of the information in technical reports is never published in conventional publications, or at least not until considerable time has elapsed. The value of the reports as a separate body of information therefore becomes more apparant.

Now to summarize the characteristics of these technical reports.

1. The report literature is voluminous in the number of titles issued and in the number of agencies involved in their origination. The number of distributing agencies is not so great, but still complex and varied enough to cause considerable confusion. The actual number of copies of each report is relatively small.

2. The reports are heterogeneous and represent a great range in quality in both form and content, from poorly written, brief, minor items of ephemeral value, to near-print, well organized and comprehensive reports of relatively permanent value.

3. The distribution of the reports is often limited as well as proscribed to qualified groups of persons. Not everyone can have access to all reports.

4. They are not available from book trade sources, but only through specified government agencies and often through military channels only. Many of them are free, especially if distribution is limited to qualified persons. Those available more generally are often priced.

5. They are not usually referenced in conventional bibliographical tools such as the CBI or periodical indexes. The librarian must become familiar with a whole new set of indexes and procedures.

6. There is no union list as to the holdings of reports in designated libraries. We do know that the Library of Congress has large collections of these reports. Early in 1957 it was announced that the Technology Department of the Carnegie Library of Pittsburgh, Pennsylvania, had become the first deposit center for reports of the Office of Technical Services of the Department of Commerce.

7. These reports are difficult to handle, once they are acquired. They have multiple personal authors, who are not nearly as important as the originating agency. They are serial in nature and often have multiple serial numbers due to the distributing agencies. They are rarely in stiff covers and require some binding or reinforcement for heavy library use. Nowadays they are often available only in microcard or microflim form, requiring special reading equipment. If they have a security classification they must be stored and handled according to elaborate controls enforced by the Department of Defense.

8. Although the reports are the result of national defense sponsorship, they contain a great deal of basic and applied sicentific data of use to the public at large. In many cases they are the only source of advance or specialized information and cannot therefore be ignored.

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BASICS OF DIGITAL COMPUTERS by John S. Murphy, No. 196, 3 vols., soft covers, $8.40; No. 196H. cloth, $9.50.

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AEROSPACE MEDICINE

64. Aerospace medicine and biology. (Formerly Aviation medicine). An Annotated bibliography, Volume II: 1954 literature.

Arnold J. Jacobius, Roman Kenk, et al. Washington, D.C., Library of Congress. Science and Technology Division, 1960. 547p. (PB 171 029) OTS $6.00.

1,386 references with descriptive notes are included in this work, which has been expanded to cover such subjects as biological rhythms, biogical orientation, closed ecological systems, physiological and psychological effects of heat, cold, isolation ,restraint, and many others.

66. Bibliography on aeromedical research with abstracts.

J.C. Robinette. Wright-Patterson Air Force Base, Ohio, Wright Air Development Division, Dec. 1959. 104p.

This bibliography comprises 315 entries, with abstracts, representing reports issued by the Aerospace Laboratory from 1957 through 1959. Arrangement is by subject categories, i.e.; behavioral sciences (engineering psychology, training psychology); biometical sciences (bioacoustics, biphysics, physiology); and engineering.

AIR POLLUTION

67. Air pollution. An annotated bibliography.

New York, American Petroleum Institute, Mar. 1960. 11p.

Fifty annotated references cover papers representing the Institute's contributions toward solution of community air pollution problems.

68. Air pollution review 1958-59.

Washington, D.C., American Chemical Society, 1960. 36p.

Abridged version appears in Indus. Eng. Chem. 52: 967-971, Nov. 1960. This review covers new publications on air pollution, effects, methods of abatement, atmospheric chemistry, and special problems. There are 638 references.

ANTENNAS

69. Design and construction of large antennas for radio astronomy, radar and communications.

G.R. Evans. Sunnyvale, Calif., Lockheed Aircraft Corp., Missiles and Space Division, June 28, 1960. 32p. (SB-60-26) PB 152 719 (Mi—$3.00 Ph—$6.30.)

Both classified and unclassified material is referenced in this 112-item bibliography.

70. Theory, design and applications of the Luneberg lens.

G.R. Evans. Sunnyvale, Calif., Lockheed Aircraft Corp., Missiles and Space Division, Sept.1960. (SB-60-34)

There are 98 annotated references reflecting the applicbility of the Luneberg lens in the designing of large antennas.

ARTIFICIAL INTELLIGENCE

71. Biological and artificial intelligence.

Dorothy I. Sweitzer. Pasadena, Calif., California Institute of Technology, Jet Propulsion Laboratory, Dec.1960. 185p. (Lit.Search 254) (Contract NASw-6)

The table of contents of this 1,113-item annotated bibliography includes the following subjects: feasibility of simulating thought processes by machine, general automata, models and theories of general thinking, processes and behavior, intelligence testing, models and theories of nerve transmission, electrical study of the brain and its functions, physiology and anatomy of the brain, machine perception—mapping, the perceptron, automatic translators, models and theories of perception, machine learning and memory, models and theories of learing, models and theories of memory or recall, decision making by machine, models and theories of decision making, information theory, man-computer symbiosis.

72. A selected descriptor-indexed bibliography to the literature on artificial intelligence.

Marvin Minsky. INST. RADIO ENGS. TRANS. HFE-2:39-55, Mar.1961.

This listing is intended as an introduction to the literature on artificial intelligence,—i.e., to the literature dealing with the problem of making machines behave intelligently. The area has been divided into categories and the references are cross-indexed accordingly.

CARBON

73. Carbon film resistors, an annotated bibliography.

G.I. Chandler. Downey, Calif., Autonetics, June 13, 1960. 54p. (Rept. EM-6154)

This bibliography of 134 partially annotated references includes information from 1941 through January 1960. They are arranged alphabetically by author and there is a subject index.

74. Radiocarbon from nuclear tests.

New York, United Nations Secretariat, Jly.14,1960. 56p.

Includes 107 references.

75. Sampling and measurement of carbon-14 levels in the atmosphere and biosphere.

New York, United Nations Secretariat, Aug.10,1960. 5p. (A/AC.82/R.105 (Add.2))

Includes 36 references.

CORROSION

76. Aluminum and corrosion. A review of progress in 1961.
F.C. Porter. CORROS.PREV.&CONTR. 8:37-43, Jan.1961.

The 168 reference review covers basic research, atmosphere and aqueous corrosion, acid and alkali attack, contact with other materials and cathodic protection, anodising, chemical conversion coatings, painting and vitreous enamelling, and Al coatings in general.

77. Bibliographic survey of corrosion 1956.
N. T. Atlas. Houston, Tex., National Association of Corrosion Engineers, 1960. 248p. (Pub. 60-12)

This is the seventh in a series of NACE bibliographies on corrosion control literature covering the period 1945-1956. A total of 22,181 abstracts is included in all volumes, 2136 abstracts in the one announced herewith. Publisher, $27.50.

78. Corrosion by vanadium pentoxide.
London, Mond Nickel Co., Aug. 1960. 40p.

Abstracts of the literature from 1949 to 1960 in chronological order.

79. Pitting of chemically inert steels.
W.Schwenk. KORROSION 13:20-25, 1960.

An annotated bibliography of 128 items dealing with the cause, enhancement, and inhibition of pitting and the development of reliable accelerated corrosion tests.

COSMIC RAYS

80. Cosmic ray measurements and measuring devices.
Esther Pereira. Pasadena, Calif., California Institute of Technology. Jet Propulsion Laboratory, Jan.1960. 83p., (Lit.Search 230) (Contract NASw-6)

A survey of the periodical and report literature comprising 445 annotated references. Material is divided into two main categories: general information and Cerenkov radiation, with subheadings of theory, instrumentation and measurements.

81. Data on the origin of cosmic rays.
V.L. Ginzburg and S.I. Syrovatskii. USPEKHI FIZ. NAUK 71:411-469, Jly. 1960.

In Russian. 144 references.

CRYOGENICS

82. Bibliography of the physical equilibria and related properties of some cyrogenic systems.
T.M. Flynn. Washington, D.C. National Bureau of Standards, May 1960. 123p. (Tech. Note 56) PB 161 557 $1.75.

The systems considered are the pure components and mixtures of helium, hydrogen, nitrogen, carbon dioxide, carbon monoxide, methane, ethane, and propane. Some 700 references are listed in alphabetical order without abstracts or notations.

83. A compendium of the properties of materials at low temperature (Phase I). Pt. III. Bibliography of references (cross-indexed).
V. J. Johnson. Wright-Patterson Air Development Division, Oct. 1960. 161p. (WADD TR 60-56, Pt. III) (Contract AF33(616)-58-4) (AD-249 777) PB 171 620 $3.00

A search of the literature for material on thermophysical properties of materials of interest in cryogenic engineering has resulted in the listing of 937 references in Part I (those pertaining to properties of fluids) and 221 in Part II (those pertaining to properties of solids) plus a supplement of 112 references for the latter.

HUMAN ENGINEERING

84. Second edition. Bibliography of human resources reports 1947-1959. Part A.
R. Bragg. Ottawa, Canada. Defense Scientific Information Services, Aug. 1960. DSIS Rept. B10)

A revised listing of a 1957 bibliography resulting from Canadian Dept. of National Defense work in the fields of human resouces and human engineering. Arrangement is according to availability, by agency, within the Defense establishment.

85. Study of the human element in future antiballistic missile systems, annotated bibliography.
E. N. Kemp and P. B. Bell. San Diego, Calif., Convair, Dec. 31, 1960. 87p. (Rept. ZG-018) (Contract Nonr-2953(00))

Approximately 500 references, with notes, are included in two sections, one on human factors, the other on systems and systems concepts.

INDIUM-ANTIMONIDE

86. Indium-antimonide.
T.S. Moss. PROG. IN SEMICONDUCTORS 5:189-220, 1960.

A review of the literature, covering preparation, band structure, optical and electrical properties, and photoeffects with 69 references.

87. Preparation and properties of indium antimonide thin films and devices using indium antimonide.
J. E. Britton and T. P. Turnbull. Lexington, Mass., Massachusetts Institute of Technology. Lincoln Laboratory, Dec. 28, 1960. 6p.

Includes 59 listings found from a search of books, periodicals, and articles for the period 1955 to September 1960 for descriptions of InSb devices.

IRRADIATION

88. Food preservation by irradiation. Supplement to CTR-357.
Washington, D.C., Office of Technical Services, Mar. 1960. 5p. (Selective Bib. 403) $0.10.

A bibliography of 57 reports listed in the two OTS monthly abstract journals: U. S. Government Research Reports and Technical Translations.

89. Irradiation testing of UO2.
W.E. Bost. Oak Ridge, Tenn. Atomic Commission, Nov. 1960. 21p. (TID 3559) OTS, $0.50.

Included are 167 references to unclassified reports and scientific journals. Irradiation behavior and effects, heat transfer calculations, fission gas release, post-irradiation examination, and irradiation capsule design are the subject areas covered.

90. Selected bibliography (on food irradiation.)

FOOD IRRADIATION 1:19-38, Jly/ Sept. 1960.

One hundred and forty references covering the years 1957 to 1959, with a few earlier works, are included. The references are grouped into four categories: food irradiation technology, packaging irradiation foods, wholesomeness and acceptance of irradiated foods, and radiation sources and dosimetry.

MAGNETOHYDRODYNAMICS

91. A bibliography of LRL (Berkeley and Livermore) unclassified reports on magnetohydrodynamics and plasma.

Dorothy I. Gleichman. Livermore Calif., California University, Radiation Laboratory, Nov. 1960. 13p. (Contract W-7405-eng-48)

A bibliography of 119 references.

92. Bibliography on magnetohydrodynamics.

London, Great Britain, Ministry of Aviation. Technical Information and Library Services, Sept. 1960. 38p.

This is a listing, without notes or abstracts, of 368 references to periodical articles and research reports.

METALS

93. Hydrides of metals and metalloids. A literature search.

Medford, Mass., Tufts University, Jly. 1960. 164p. (TID 3902) OTS $2.75.

This bibliography supplements those issued by Metal Hydrides, Inc. ,in 1949 and 1952 (reports NP-3227 and NP-4716 respectively). There are no annotations and arrangement is by hydride type. Available at OTS.

94. Properties of platinum metals and alloys.

PLATINUM METALS REV. 4:91, Jly. 1960.

Provides a survey of the literature of the past 50 years on the properties of the metals and on the constitution of their binary alloys, listing 281 references.

METEOROLOGY

95. Annotated bibliography on forecast verification.

A. J. Meglis. METEOROL. & GEOASTROPHYS. ABS. 11:1129-1174, Jly. 1960.

A selective bibliography of 194 items, with abstracts.

96. Annotated bibliography on rocket meteorology.

Elmer Kiss. METEOROL. & GEO.-ASTROPHYS. ABS. 11:1480-1535, Sept. 1960.

This bibliography, covering the period 1950-1960, is limited to articles, monographs, and collected works dealing with meteorology and the upper atmosphere. Material giving results of work using satellites has been omitted and will be included in bibliographies to be published in the near future.

97. Recent literature on radar meteorology.

A. J. Meglis and Robert Panara. METEOROL. & GEOASTROPHYS. ABS. 11: 1307-1345, Aug. 1960.

This bibliography of over 150 items, with abstracts, continues the one with the same title listed in the Summer 1959 issue of Sci. Tech. News, entry 58.

PLASMA

98. Development and possible applications of plasma and related high-temperature generating devices.

Washington, D.C., National Research Council, Materials Advisory Board, Aug. 30, 1960. 229p. (MAB 167-M) (Contract DA36-039-sc-76436)

99. Recent advances in electric arc plasma generation technology.

R. R. John and W. L. Bade, ARS J. 31:4-17, Jan. 1961.

A review article which includes a bibliography of 168 references.

100. Use of submillimeter waves for studying high density plasmas.

S.M. Hamberger. Harwell, Berks, Eng., U.K. Atomic Energy Authority, Research Group, Atomic Energy Research Establishment, May 1960. 41p. (AERE-R-3260)

Includes 105 references.

PLASTICS

101. 1959 review of literature on plastic working of metals.

F. W. Boulger. New York, American Society of Mechanical Engineers, 1960. 4p. (Paper 60-PROD-13)

102. Working bibliography for field of reinforced plastics.

H. Raech, Jr. SOC. PLASTICS ENGRS. J. 16:1221-1225, Nov. 1960.

Review abstracts of selected bibliography covers reinforced plastics from adhesives and latex techniques to basic fiber properties and premix molding.

103. The year 1960 in review.

MOD. PLASTICS 38:141-142, 144, 146, 147, 150, 152, 154, 156, Jan. 1961.

Over 500 references are cited in this comprehensive review of all phases of the plastics industry, including space exploration, materials, processing, applications, properties, and standards.

RADIATION

104. Atmospheric absorption of 10-400 kmcps radiation: summary and bibliography to 1961.

F. S. Rosenblum. MICROWAVE J.4: 91-96, Mar. 1961.

A selective list of references covers the period 1946 to early 1961.

105. Phenomena in the atmosphere. 2. Radiative energy.

Washington, D.C., Library of Congress, Library Services Section, Air Information Division, Nov. 8, 1960. 33p. (Rept. 60-86) (AD-248 403) Order from LC or SLA mi $3.00, ph $6.30. 61-15192.

Contents include information on cosmic radiation, solar radiation, corpuscular radiation, earth radiation, atmospheric radiation, radiation of the counterglow, infrared, ultraviolet, and green rays, radiative balance and transfer, rockets, missiles, satellites, and photography. Material is based solely on USSR publications.

RADIOBIOLOGY

106. Cellular radiobiology.
Tikvah Alper. ANN. REV. NUCLEAR SCI. 10:489-530, 1960.

A survey, with 224 references.

107. A selected list of references on marine and aquatic radiobiology.
Washington, D.C., Atomic Energy Commission, Division of Biology and Medicine, May 20, 1960. 2p. (TID-3903, Appendix) OTS $1.00.

A listing, only, of 25 reports arranged by issuing agency.

108. Studies in quantitative radiobiology.
K. G. Zimmer. AKAD. WISS. U. LIT. MAINZ MATH. NATURW. KL. ABHANDL. no. 3:111-217, 1960. In German.

There are about 400 references in this review.

109. Vertebrate radiobiology: late effects.
J. B. Storer. ANN. REV. NUCLEAR SCI. 10:561-582, 1960.

A survey, with 163 references.

110. Vertebrate radiobiology: metabolism of internal emitters.
R. C. Thompson. ANN. REV. NUCLEAR SCI. 10:531-560, 1960. (HW-SA-1900)

A survey, with 224 references.

RADIO WAVES

111. Bibliography of tropospheric radio wave scattering.
Richard L. Abbott. Boulder, Colo., National Bureau of Standards, Boulder Laboratories, Nov. 1960. 79p. (Tech. Note 80) (PB 161 581) $2.25.

681 non-annotated references appear. Emphasis is on tropospheric scattering of radio waves by turbulence-induced inhomogeneities of the dielectric constant (local wave velocity in the atmosphere). Papers on related topics such as turbulence theory and measurements, statistics, instrumentation, and some papers on sound scattering are also included.

112. A survey and bibliography of recent research in the propagation of vlf radio waves.
J. R. Wait. Boulder, Colo., National Bureau of Standards, Boulder Laboratories, May 1960. 44p. (Tech. Note 58) Available from OTS, $0.75. PB 161559.

Includes references on ground wave propagation, characteristics of the lower ionosphere, general theories for propagation in inhomogeneous media, calculations of ionospheric reflection coefficients, measured ionospheric coefficients (VLF), mode theory of ELF and VLF ionospheric propagation, theory of the propagation of pulses in ELF and VLF ionospheric propagation, characteristics of lightning discharges, atmospheric waveforms (VLF), atmospheric waveforms (ELF), noise, and whistlers.

RADIOISOTOPES

113. Potential applications of radioisotopes to the mining, preparation, transportation, storage, handling, and use of coal.
H. J. Rose. Pittsburgh, Pa., Bituminout Coal Research, Inc., Nov. 1, 1960. 241p. (NYO 2859) (Contract AT(30-1)-2311) Available from OTS, $3.00.

Includes 366 references.

114. Radioisotopes in agriculture: animal husbandry, fertilizer uptake, plant physiology, photosynthesis and entomology. A selected bibliography.
J. A. McCormick and H. E. Voress. Washington, D.C., Atomic Energy Commission, Dec. 1960. 35p. (TID-3078) OTS $1.00.

This bibliography contains 148 selected references on the uses of radioactive and stable isotopes in animal husbandry and in studies of fertilizer uptake by plants, plant physiology, photosynthesis and entomology. Period covered is 1957-1958. There are subject and author indexes.

115. Radioisotopes in world industry. Abstarcts of selected foreign literature.
Washington, D. C., Office of Isotopes Development, AEC, Sept. 1960. 143p. (TID-6613) Available from OTS, $2.50.

This bibliography is prepared on a continuing basis by the Science and Technology Division of the Library of Congress under an agreement with AEC. The volume contains 658 abstracts of selected foreign literature grouped by subject and sub-grouped by country. Author and country indexes are appended.

SALTS

116. Fused salts.
G. E. Blomgren and E. R. Van Artsdalen. ANN. REV. PHYS. 11:273-306, 1960.

An extensive review, with 258 references.

117. Molten and fused salts.
Washington, D.C., Office of Technical Services, Aug. 1960. 9p. (Selective Bib. 425) Available from OTS $0.10.

A bibliography of 135 reports listed in the two OTS monthly abstract journals: U. S. Government Research Reports and Technical Translations. This bibliography includes reports added to the OTS collection during the period 1950 to September 1960.

SEMICONDUCTORS

118. Absorption-edge spectrum of semiconductors.
T. P. McLean. PROG. IN SEMICONDUCTORS 5:53-102, 1960.

Includes 72 references.

119. Bibliography on semiconductor nuclear radiation detectors.
J. L. Blankenship. Oak Ridge, Tenn., Oak Ridge National Laboratory, Dec. 6, 1960. 14p. (TID-3907) OTS 50c.

This listing of 150 items is a revision of the one published as ORNL Report 2583 in September 1958, see no. 102, Fall 1959 issue of Sci. Tech. News.

120. Electrical properties of semiconductor surfaces.
T. B. Watkins. PROG. IN SEMICONDUCTORS 5:1-25, 1960.

A review of the literature, with 99 references.

121. Optical phenomena in semiconductors.
B. Lax and S. Zwerdling. PROG. IN SEMICONDUCTORS. 5:221-272, 1960.

A review of the literature, with 82 references.

122. Semiconductors.
Washington, D.C., Office of Technical Services, Sept. 1960. 20p. (Selective Bib. 435) 10c

This bibliography covers PB reports, AEC reports and translations on semiconductors added to the OTS collection during the period April 1950 to October 1960.

123. Thermal conductivity of semiconductors.
J. Appel. PROG. IN SEMICONDUCTORS 5:141-187, 1960.

Includes 96 references.

THERMOELECTRICITY

124. Bibliography on thermoelectricity.
M. J. Goodall and J. E. R. Young. Winchester, Hants, IBM World Trade Laboratories (Gt. Brit.) Ltd., June 1, 1960. 72p. (Bib. 1)

Several hundred references, with abstracts, are listed. They were copied, for the most part, from Science Abstracts for the past twelve years, and are classified under eleven headings.

125. Thermoelectricity.
Washington, D.C., Office of Technical Services, Sept. 1960. 10p. (Selective Bib. 432) $0.10.

This bibliography includes PB and AEC reports, and translations on themoelectricity added to the OTS collection during the period 1945 to October 1960. There are about 100 references.

TRANSDUCERS

126. Bibliography of NBS reports on performance of telemetry transducers and calibration methods.
J. Pearlstein. Washington, D.C., Diamond Ordinance Fuze Laboratories, Oct. 12, 1960. 9p. (Tech. Rept. 887) Available from LC or SLA mi $1.80 ph $1.80. (PB 153 496)

This bibilography is a current list of reports that have been prepared by the Mechanical Instruments Section, Instrumentation Division of the National Bureau of Standards, under a program to determine the performance of transducers used for telemetry and to develop testing and calibration methods for these devices.

127. Searching the literature for transducer information. Part II. A survey of the field.
J. Pearlstein. Washington, D.C., Diamond Ordinance Fuze Laboratories. Dec. 1. 1960. 120p. (Tech. Rept. 898) (AD-249 131) PB 153 505; L.C. Mi-$6.00 Ph-$18.30.

Presents a survey of current knowledge with respect to the availability, application, design, calibration, and testing of transducers.

128. Transducers.
Washington, D.C., Office of Technical Services, Aug. 1960. 7p. (Selective Bib. 428) $0.10.

A bibliography of reports listed in the two OTS monthly abstract journals: U. S. Government Research Reports and Technical Translations. This bibliography includes reports added to the OTS collection during the period 1945 to September 1960.

Supplement

This is a listing of bibliographies dated 1959 and 1960 which, due to limitations of space, could not be included in the quarterly Digests.

ADHESIVES

129. Survey of adhesion and adhesives.
Frank W. Reinhart and Irma G. Callomon. Washington, D. C. National Bureau of Standards, Jly. 1959. 277p. (WADC Tech Rpt. 58-450) (Contracted AF33(616)53-9) (AD-226 809)

This is a continuation of a literature survey published in 1945 as Tech. Note 989. There are 729 references in the current bibliography, covering 1945-1957.

AGRICULTURE

130. Bibliography of marketing and other economic information of floriculture and ornamental horticulture.
Alvin Z. Macomber and Elmer J. Moore. Washington, D. C., U. S. Dept. of Agriculture Marketing Service, 1959. rev. ed., llp. (AMS 136)

Supersedes bibliography issued August 1956.

131. Bibliography of organic acids in higher plants.
M. L. Buch. Washington, D. C., U. S. Dept. of Agriculture, Agricultural Research Service. Mar. 1960. 102p. (Agr. Handbook 164)

This is an alphabetical non-annotated listing of 823 references indicating occurrence of organic acids in higher plants. Nonvolatile, non-nitrogen-containing. carboxylic acids whose structure is generally accepted are included. Fatty acids, long-chain polymers—such as pectins — and compounds which contain a sugar group as part of the molecule are excluded. Thus, carboxylic sapogenins are included but saponons are not. The acids reported are those that art found in the free state or as salts, not as esters.

132. Bibliography on alcohol production and use of agricultural crops as source of motor fuels.
Washington, D. C., U. S. Dept. of Agriculture, Agricultural Research Service, Aug. 1959. rev. ed., 6p.

133. Bibliography on forest genetics and forest tree improvements, 1956-57.
J. W. Wright and R. F. Finn. Washington, D. C., U. S. Forest Service, Mar. 1960. 87p. (Misc. Pub. 808)

This is the third in a series and covers the years 1956 and 1957. The first two covered the years 1954 and 1955 and were published as Station Papers 77 and 90 by the Northeastern Forest Experiment Station, Upper Darby, Pa. There are no annotations; listing is alphabetical, with a subject index.

134. Composting of organic wastes: an annotated bibliography, supplement 1.
J. S. Wiley. Savannah, Ga., Dept. of Health. Education and Welfare, Technical Development Laboratories, June 1959. 66p. (PB 147 220)

Contains 141 references.

135. Conditioning of wheat for milling; survey of literature (with bibliography).
Dorothy Bradbury and others. Washington, D. C., U. S. Dept. of Agricul-

ture, May 1960. 149p. (Misc. Pub. 824)
For sale by the Superintendent of Documents. This bibliography of 666 references was prepared at the Northern Utilization Research and Development Division Laboratory at Peoria, Ill., for the purpose of providing the flour milling industry with information fundamental to the development of new and improved methods for the production of flour for industrial and food uses. The listing of the references is preceded by 101 pages of data from the literature on conditioning of wheat.

136. Food preservation (except by irradiation) (1950-1960).
Washington, D. C., Office of Technical Services, May 1960. 10p. (Selective Bib. 412)

125 references are listed in categories as follows: dehydration, freezing, and food preservation, general.

137. Handbook of toxicology. Volume III. Insecticides. A compendium.
William O. Netherbon. Washington, D. C., National Research Council, Div. of Biology and Agriculture, June 1959. 854p. (WADC Tech. Rept. 55-16, vl. 3) (Contract AF33(616)2873) (AD-216 529)

A comprehensive bibliography of 3404 references is keyed to the text by numerical marginal text references on each page.

138. New Agricultural bibliographies.
Rudolf Lauche. INTERNATL. ASSOC. AGR. LIBRARIANS & DOCUMENTALISTS QUART. BULL. 4:218-245, Oct. 1959.

Included in the section on bibliographies are listings contributed from a number of countries. It is arranged as a supplement to International Handbuch der Bibliographien des Landbaues.

139. Urbanization and changing land use. A bibliography of selected references, 1950-1958.
E. G. Davis, H. A. Johnson, and Claude Haren. Washington, D. C., Dept. of Agriculture, May 1960. 212p. (Misc. Pub. 825)

An annotated bibliography, with subject and author index, of 1319 references to the literature.

AIRCRAFT

140. Air mobility and the army.
Fort Rucker, Ala., Army Aviation School, May 1, 1960. 10p. (Spec. Bib. 2, rev. (supersedes Spec. Bib. 2, AD-202 580)) (AD-237 413)

Includes 170 references.

141. Airport marking and lighting systems: A summary of operational tests and human factors.
W. A. Lybrand, W. S. Vaughan Jr., and J. P. Robinson. Arlington, Va., Human Sciences Research, Inc., May 1959. 415p. (Res. Rept. 59/6 MK) (Contract FFA/BRD-13) (PB 161 750-2)

Includes a bibliography of 653 references and selected annotations.

142. Supplement No. 3 to a bibliography on aircraft noise, and addendum to suppl. 3, items 500-724.
London, Great Britain, Ministry of Supply, June 1959. 41p. (TIL/BIB (U)/11)

Periodical article and report literature, with annotations.

AMMONIA

143. Physico-chimie et chimie minerale dans l'ammoniac liquide.
M. Heuberger and F. Botter. Paris, France, Commissariat a L'Energie Atomique, 1959. 37p. (Serie Bib. 4)

Literature survey of the 422 titles issued between 1943 and 1959 about the physical and inorganic chemistry of liquid ammonia.

144. Reactions d'echange isotopique entre l'ammoniac et l'hydrogene ou des composes hydrogenes.
M. Heuberger and F. Botter. Paris, France, Commissariate a L' Energie Atomique, 1959. 25p. (Serie Bib. 3)

This bibliography of 94 items, with abstracts, is concerned with hydrogen-deuterium exchange reactions in ammonia. Period covered is 1933 to 1959.

145. Selected bibliography of physico-chemical properties in liquid ammonia and related solvents.
R. F. Sankuer. East Lansing, Mich., Michigan State University, Oct. 1, 1959. 96p. (TID 3904) (Contract AT-(11-1)-312.)

716 non-annotated items are included in alphabetical arrangement.

ATOMIC ENERGY

146. Bibliografia sulla diffrazione die neutroni (bibliography on neutron diffraction).
G. Caglioti, A. Paoletti, F. R. Ricci, and M. Zocchi. Rome, Italy, Comitato Nazionale per le Ricerche Nucleari, Divisione Studi e Ricerche, May 1959. 29p.

A bibliography of 278 references.

147. Bibliographies of interest to the atomic energy program.
H. E. Voress, J. M. Jacobs, and N. K. Smelcer. Oak Ridge, Tenn., U. S. Atomic Energy Commission, Nov. 1959. 74p. (TID 3043, rev. 1) (Suppl. 1)

This compilation contains 561 references, with annotations, to both bibliographies and literature surveys on various aspects of atomic energy. References cited are to both report and published literature and are arranged by issuing agency. Author, subject, and report number availability indexes are provided. This listing brings references up-to-date since the issuance of TID-3043 (rev. 1) dated Mar. 15, 1958.

148. Criticality studies. A literature search.
R. L. Scott. Oak Ridge, Tenn., U. S. Atomic Energy Commission, Aug. 1959. 117p. (TID-3533)

This issue of 1122 references is to serve pending completion of a formal bibliography on the subject. Includes references to experimental and theoretical studies of conditions for criticality with various materians and configurations, as well as to fissionable materials, both during critical experiments and in plants for the chemical and metallurical processing of fissionable materials.

149. Dispersion relations in the quantum-field theory.
Zofia Bialynicka-Birula. POSTEPY FIZ. 10:409-423, Jly./Aug. 1959.

In Polish. The nature and application of dispersion relations in quantum field theory were surveyed. The dispersion of Pimesons on nucleons was considered in light of the survey. An extensive bibliography is included.

150. Economia dell'energia atomica. Rassegna bibliografica e di documentazione. (Economics of atomic energy. Bibliografic and reference survey).
Rome, Italy. Banca Nazionale del Lavore, 1959. 3rd. ed., 104p.

Important publications of the world are listed by country.

151. Economics of nuclear power. A bibliography of selected literature.
W. E. Bost. Oak Ridge, Tenn., U. S. Atomic Energy Commission, Office of Technical Information Extension, Jan. 1960. 89p. (TID-3089)

Included are 518 selected references to unclassified reports and published literature. Author, report number and subject indexes are given.

152. High-energy nuclear reactions. A literature search.
Jerome Hudis. Upton, N. Y., Brookhaven National Laboratory, 1960. 40p. (TID-3901)

A review with 350 references.

153. Informal listing of bibliographies of atomic energy literature. Bibliographies issued or in progress during February-March 1960.
Oak Ridge, Tenn., U. S. Atomic Energy Commission, Mar. 1960. 24p. (Informal Supplement 3 to TID-3043, Rev. 1, Suppl. 1) (See Item 260)

This listing represents a change in title from the former Bibliographies in the Atomic Energy Program issued at intervals. Arrangement is alphabetical by issuing agency. Part I is entitled Bibliographies Issued; Part II is Bibliographies in Preparation; Part III is Classified Bibliographies. Included is a combination subject and author index and a report number index. Notifications of bibliographies to be included are solicited, the objective of the listing being to avoid duplication of effort.

154. List of bibliographies on nuclear energy. Vl. 1, No. 1.
Vienna, International Atomic Energy Agency, June 1960. 26p.

A list of bibliographies on nuclear energy recently published, in preparation, or planned is presented in order to enable duplication of effort to be avoided and as a means of disseminating information. Entries are classified according to subject and subdivided into bibliographies published and bibliographies in preparation. Under these subdivisions the entries are arranged by title in alphabetical order.

155. Literature survey on detection of neutrons by scintillators.
Tel-Aviv, Israel, Atomic Energy Commission, Aug. 1959. 13p.

References, numbering 144, were obtained from Nuclear Science Abstracts 1948 through issue No. 11, 1959.

156. Literature survey on (n,p) and (n, 2n) and (n, a) reactions or nuclear reactions with 14-19 mev neutrons.
Tel-Aviv, Israel, Atomic Energy Commission, May 1959. 18p. (Rept. LS-42)

A bibliography of 190 references is presented on (n, p), (n, 2n), and (n, a) reactions or nuclear reactions with neutrons at 14 to 19 Mev. The references were collected from Nuclear Science Abstracts 1948 to March 1959, Physics Abstracts 1948 to January 1959. Geneva Conference Papers 1955 and 1958, U. S. research reports, bibliographies, and books.

157. Literature survey on nuclear reactions and nuclear uses of lithium.
Tel-Aviv, Israel, Atomic Energy Commission, Aug. 1959. 49p. Rept. LS-44)

A bibliography of 496 references is presented on lithium, with separate sections on nuclear reactions, natural abundance ratio, and isotope separation, uses in reactors, other uses, and available bibliographies. The references were collected from Nuclear Science Abstracts 1948-1958, Chemical Abstracts 1950-1958, reports in Israel Atomic Energy Commission Library, and UKAEA and AERE Information Bulletins.

158. Multiple generation of particles in highest energy nucleon collisions.
Jerzy Bartke and Roman Holynski. POSTEPY FIZ 10:309-339, May/June 1959.

In Polish. A survey is given of published literature on the multiple generation of particles in nucleon-nucleon collisions. The review includes experimental data published in 1958 and earlier. Various jets are described and their relations to the phenomenological theories of Fermi, Landau, and Heisenberg are formulated.

159. Nuclear quadrupole resonance.
V. S. Grechishkin. USPEKHI FIZ. NAUK. 69:189-216, Oct. 1959.

In Russian. A systemized review is given of the accumulated data and the investigations now in progress in USSR in the field of nuclear quadrupole resonance. Includes 180 references.

160. Nucleonics.
W. Wayne Meinke. ANALYT. CHEM. 32:104R-136R, Apr. 1960.

A review of publications from late 1957 to late 1959. The 1959 references covered discussions of general aspect, radioisotopes as sources and tracers, instrumentation and measurement, safety, and training in nuclear techniques.

161. Sources of information in atomic energy.
L. J. Anthony, Harwell, Berks., Great Britain, Atomic Energy Research Establishment, Jan. 1960. 42p. (AERE Lib/L 1(3rd. ed.)

Sources of British, American, and Russian information are given, including lists of periodicals and abstracting services which include atomic energy references. Some bibliographies are also listed.

162. United Kingdom Atomic Energy Authority and associated British work on controlled thermonuclear reactions. A list of unclassified documents and published articles.
C. S. Sabel. Harwell, Berks., Great Britain, Atomic Energy Research Es-

tablishment, Aug. 1959. 29p. (AERE Bib.-124)

This list supersedes AERE Inf/Bib. 117 and includes 249 annotated book, journal, memoranda, and report references.

AUTOMATION

163. Annotated bibliography and literature survey of advanced production techniques.

G. I. Chandler. Downey, Calif., Autonetics, Sept. 21, 1959. 308p. (Rept. EM-5770) (AD-228 765)

A total of 990 annotated references, with author and subject indexes for the period 1956-1959, is presented. Emphasis is toward the Electro-Mechanical Manufacturing Industry, including electronic and precision mechanical assembly, machine shop and sheet metal processes, with a general coverage of automation.

164. Automatic operations in analytical chemistry.

G. D. Patterson, Jr. ANALYT. CHEM. 31:646-655, Apr. 1959.

A review article with 290 references, dealing with the application of automation to measurement and data.

165. Bibliography on the subject of magnetic elements in automation, telemechanics, and computer technology for 1958.

AUTOMAT. TELEMECH. MOSK. 20: 1302-1310, 1959.

In Russian.

166. A concise bibliography of the literature on artificial intelligence.

Alice M. Pierce. Bedford, Mass. Air Force, Cambridge Research Center, Sept. 1959. 18p. (AFCRC-TN-59-773)

This bibliography of 239 rfeerences is a bare listing of the literature on "artificial intelligence" as the term applies to systems whose operating behavior would be called "intelligence" if exhibited by man. Unindexed, it has a minimum of cross references to related subjects, most references to physiology, psychology, logic, automata theory, decision theory, theory of games, and even neural net theory, having been omitted.

BEARINGS

167. Bearings 1945-1960.

Washington, D. C., Office of Technical Services, Apr. 1960. 17p. (Selective Bib. 410)

A bibliography of 294 reports listed in U. S. Government Research Reports, and Translation Monthly. References are arranged in sections: lubricated, journal, roller, friction, anti-friction, and ball.

168. A bibliography on gas-lubricated bearings.

E. B. Sciulli. Philadelphia, Pa., Franklin Institute, Laboratories for Research and Development, Sept. 15, 1959. 104p. rev. ed. (Rept. IR, I-A2049-6) (Contract Nonr-2342(00) (AD-277 359) (PB 161 017)

An annotated bibliography of 290 references, which is a revision and expansion of one issued in Dec. 1927. It is, now, considered a comprehensive listing of references prior to July 1959.

BERYLLIUM

169. Application of beryllium in non-ferrous casting alloys.

E. Brunhuber. GIESSEREI 47:180-185, Apr. 7, 1960.

In German. A survey of published knowledge. Refers to cast Be bronzes, Be for deoxidation and desulphurization, and for prevention of burning in Al-and Mg-base alloys.

170. Beryllium 1945-1960.

Washington, D. C., Office of Technical Services, June 1960. 19p. (Selective Bib. 413)

A bibliography of reports listed in the two OTS monthly abstract journals: U. S. Government Research Reports and Technical Translations. Reports are arranged in categories as follows: beryllium metals and alloys; beryllium compounds; carbides, and isotopes; toxicity, safe handling of beryllium; translations on berryllium.

171. Beryllium: a search of the literature: 1957-1959.

K. D. Carroll. Sunnyvale, Calif., Lockheed Aircraft Corp. Missiles and Space Division, Apr. 1960. 59p. (LMSD 288190, Suppl. 1) (PB 161 812)

Entries, numbering 135, are arranged under broad subject areas, and supplement those in a bibliography of the same title dated Jan. 1960. (See Winter, 1960, issue).

172. Beryllium, survey of literature.

K. D. Carroll. Sunnyvale, Calif., Lockheed Aircraft Corp. Missiles and Space Division, Aug. 1960. 82p. (LMSD 288190, Suppl. 2) (AD244 263)

Adds 228 references.

173. Beryllium crack propagation and related studies.

K. D. Carroll. Sunnyvale, Calif., Lockheed Aircraft Corp. Missiles and Space Division, Aug. 24, 1960. 23p. (Rept. SB60-30)

Citations. numbering 141, are pertinent to surface cracks which develop in beryllium when it is subject to bending loads, its recovery from stress and bending and fracture or crack propagation to catastrophic failure.

174. A bibliography of report literature on beryllium, January 1954-November 1959.

Helen J. Chick. Loe A'amos, N. Mex., Los Alamos Scientific Laboratory, Nov. 10, 1959. 65p. (Rept. 2382)

A bibliography containing 237 references to literature published between January 1954 and November 1959 is presented on the properties, metallurgy, and fabrication of beryllium.

175. Fabrication of beryllium. A bibliography.

E. A. Cernak. Middletown, Conn., Pratt and Whitney Aircraft Corp., Apr. 1, 1960. 28p. (CNIM 1802-14) Available from OTS.

Covering the period 1950 to 1959, the 147 references are on brazing, casting, cladding, extrusion, and welding of beryllium and beryllium-rich alloys.

176. Heat Capacity of beryllium.
J. W. Holladay. Columbus, Ohio, Defense Metals Information Center, Battelle Memorial Institute, Oct. 19, 1959. 11p. (Memo 36) (PB 161 186)

Includes 23 references giving data on heat.

177. Purification of beryllium compounds: a literature survey.
Oak Ridge, Tenn., U. S. Atomic Energy Commission, Oak Ridge National Laboratory, June 16, 1960. 42p. (Rept. 2938)

Includes 90 references to journal articles and research reports.

178. Toxicity and hazards of beryllium and rocket propellants. A literature search.
W. E. Bost. Oak Ridge, Tenn., U. S. Atomic Energy Commission, Office of Technical Information Service Extension, Oct. 1960. 22p. (TID 3531, rev. 1)

An expanded version of the bibliography first recorded as Item 5, Spring 1960 issue.

179. Toxicity of beryllium.
J. Cholak. Cincinnati, Ohio, Cincinnati University, Kettering Laboratory, Jan. 28, 1959. 30p. (AMC Tech. Rept. 7-665) (Contract AF33(600)37211) (PB 161 319)

This report, containing 50 references, based upon current knowledge and experience, has been prepared as a review and as a preliminary guide for use by individuals who have the responsibility for protecting the health of personnel engaged in operations in which beryllium is used.

180. Toxicology of beryllium. A bibliography.
E. D. Hutchinson et al. Rochester, N. Y., Rochester University, Apr. 29, 1960. 78p. (Rept. 570) (Contract W-7401-eng.-49)

Included are 670 references to periodical articles and report literature.

BORON

181. Chemistry of boron and boron compounds. A literature search.
W. E. Bost. Oak Ridge, Tenn. U. S. Atomic Energy Commission, Technical Information Service Extension. Jan. 1959. 27p. Available from OTS.

Included are 224 references from AEC-held unclassified report literature appearing as unpublished reports and reports published in journals. Arrangement is alpha-numerical by report number.

182. Sodium tetraphenylboron, 1958. A bibliography.
A. J. Barnard, Jr. and H. Buechl. CHEM. ANAYLST 48:44-45, 49, 1959.

This contains 54 references for 1957 and 27 additional references for 1955-1957.

CATALYSTS

183. Annotated bibliography on ruthenium, rhodium, and iridium as catalysts. Selected references with abstracts, 1881 to June 1959.
Ann E. Rea and Marguerite Bebbington. New York, The International Nickel Co., June 1959.

The more than 300 abstracts are arranged chronologically according to reaction and starting material as indicated in the Table of Contents. Four indexes facilitate location of specific information: (1) catalyst index, (2) index of reactions, reactants, and products (3) author index, and (4) patent index. The catalyst index also includes cobalt, nickel, osmium, palladium, and platinum catalysts.

184. Effect of the amount of catalyst on the velocity of cataylytic hydrogenation.
A. B. Fasman and D. V. Sokol'skii. TRUDY INST. KHIM. NAUK. AKAD. NAUK KAZAKH. SSR. 5:114-145, 1959.

An extensive review (123 references 1886-1958) in Russian.

CHROMIUM

185. Annotated bibliography on plating with chromium and nickel.
B. H. Nagle. Downey, Calif., Autonetics. Feb. 10, 1960. 162p. (Rept. EM-5989) (AD-242 211)

A bibliography of literature published, particularly between 1955-1959, concerning processes, and problems of plating with chromium and nickel. There are 461 references arranged chronologically and followed by an author and subject index.

186. Duktiles chrom.
H. L. Wain and A. R. Edwards. METALL.Z. 14:387-395, May 1960.

Includes 108 references

187. Preparation and properties of high-purity chromium.
A. R. Edwards, J. I. Nish, and H. L. Wain. METALLURGICAL REV. 4:403-449, 1959.

A comprehensive review with 175 references.

CHEMISTRY

188. Chromatography
H. H. Strain. ANALYT. CHEM. 32:3R-18R. Apr. 1960.

A review with 462 references.

189. Literature survey on calcium hydride.
Eugene P. Kilb. Cincinnati, Ohio. General Electric Co., Aircraft Nuclear Propulsion, Jly. 1959. 58 p. (Contracts AF33(600-38062; AT(11-1)-171) Available from OTS.

An exhaustive bibliography of 133 references, covering the period 1891 to 1955. Included are data on the history and physical, chemical, and the nuclear-and electron-configuration properties.

190. Phototropy, a literature review.
Glenn H. Brown. Blue Ash., Ohio, Polacoat, Inc. Dec. 1959. 60p. (WADC TR-59-436) (Contract AF33(616)-5469) (AD-234009) (PB 161519)

This review including 171 references is limited to articles referenced in Chemisches Zentralblatt from 1880 to 1910 and in Chemical Abstracts from 1907 to 1955. Various books dealing with photochemistry are also reviewed.

191. Polarographic theory, instrumentation, and methodology.
David N. Hume. Cambridge, Mass., Massachusetts Institute of Technology, Laboratory for Nuclear Science, 1959.

33p. (Rept. AECU-4552) (Contract AT-(30-1)-905) Available from OTS.

There are 189 references in this bibliography covering the period mid-1957 to mid-to-late 1959. Also in Analyt. Chem. 32:137R-144R, Apr. 1960.

192. Review and bibliography on design and use of windows for optical measurements at elevated temperatures and pressures (1881-1959).
R. E. Biggers and J. M. Chilton. Oak Ridge, Tenn., U. S. Atomic Energy Commission, Oak Ridge National Labatory, June 12, 1959. 88p. Available from OTS.

Includes about 117 references, most of them with abstracts.

COATINGS

193. Bibliography on flame coating.
F. R. Bennett and L. S. McCollum. Canoga Park, Atomics International Division, North American Aviation, Feb. 20, 1960. 20p. (Rept. NAA-SR Memo-5025) Available from OTS.

This is the result of a literature search for all available information on flame coating and related subjects.

194. Metal coatings 1950-1960).
Washington, D. C., Office of Technical Services, May 1960. 20p. (Selective Bib. 409)

A bibliography of reports listed in the two OTS monthly abstract journals: U. S. Government Research Reports, and Technical Translations. Reports are arranged in sections as follows: metal coatings, general, electroplating, electropolishing, vapor deposition and vacuum deposition, phosphate coatings, plating.

195. Protective coatings.
Francis Scofield. INDUS. ENG. CHEM. 51:1213-1214, Sept. 1959.

References to various reports and discussions on the use of catalyzed coatings and water-thinned coatings are presented.

COBALT

196. Informative abstracts on magnetostriction in cobalt and cobalt alloys.
Ellis Fletcher. Columbus, Ohio, Cobalt Information Center, 1959. 60p.

Approximately 110 abstracts and listings on aspects of ferromagnetic material exposure to magnetic fields or stress in Co and Co alloys are presented covering the period 1874 to 1959.

197. Removal of sulphur from mineral oils. Use of cobalt and nickel. Annotated bibliography.
London, The Mond Nickel Co., Mar. 1959. 142p.

This is an annotated bibliography of 419 references to the use of nickel and cobalt as agents for the removal of sulphur from hydrocarbons.

CORROSION

198. Corrosion (Ten-year bibliography).
Washington, D. C., Office of Technical Services, Dec. 1959. 39p. (Selective Bib. 401)

A bibliography containing 1004 references of reports listed in the 2 OTS monthly abstract journals: U. S. Government Research Reports, and Technical Translations. The information is arranged in groupings of PB reports, AEC reports, and translations in sections as follows: corrosion-resistant coatings, corrosion-resistant materials; stress corrosion; corrosion tests and testing equipment; and corrosion; general, including galvanic corrosion, corrosion effects of materials, etc.

199. Corrosion and corrosion protection of iron and steel: A review of the literature published in 1954-1955.
H. Steinrath and H. Ternes. STAHL UND EISEN 79:216-222, Feb. 19; 307-313, Mar. 5; 437-445, Apr. 2; 641-647, Apr. 30; 731-736, May 14, 1959.

In German. 937 references are listed.

200. Corrosion-testing in Europe, 1950-1959. A Bibliography.
London, The Mond Nickel Co., Feb. 1960. 34p.

Abstracts of about 110 papers in chronological order.

201. Critical review of literature on formation and prevention of scale.
Ann Arbor, Mich., W. L. Badger and Associates, Inc., Jly. 1959. 51p. (Prog. Rept. 25) (Contract 14-01-001-99) (PB-161399)

Included are 143 references. The report states that there are 900 abstract cards on file in the Office of Saline Water Research and Development. They are the result of a comprehensive survey of literature published since 1930.

202. Literature survey on aqueous corrosion of uranium and its alloys. Its mechanism and its prevention in nuclear reactors.
Israel. Atomic Energy Commission, Tel-Aviv, May 1959. 18p. (Rept. LS-40)

A bibliography is presented on aqueous corrosion of U and U alloys, the mechanism, and prevention in nuclear reactors. The references were collected from Chemical Abstracts, vls. 48-52, and vl. 53, nos. 1-3 (1954-1959; Metallurgical Abstracts, vls. 19-25, vl. 23 missing, and vl. 26, nos. 1-5; and Nuclear Science Abstracts, vls. 1-2 and vl. 13, nos. 1-3 (1948-1959). Contains 182 references.

203. Stress-corrosion of nickel-containing materials.
London, The Mond Nickel Co., May 1960. 86p.

Abstracts of 214 papers published in the period 1955 to early 1960, covering the stress corrosion of about 40 different Ni-containing alloys in over 30 different media (inorganic and organic materials, molten metals, petroleum, body fluids, sea water, and natural and industrial atmospheres).

204. Stress-corrosion problems.
J. Dirian. Paris, France, Commissiariat a l'energie Atomique, 1959. 52p. (Bib. 2)

References with abstracts, numbering 239, are grouped under the headings: theory and mechanism, steels, light alloys, other metals and alloys.

CREEP

205. Creep-testing: apparatus, theories, theories and techniques.

London, The Mond Nickel Co., Sept. 1959. 105p. (B.N.F. Serial 45, 741)

About 300 abstracts or relevant literature, 1930-1959, arranged chronologically with author index.

206. Stress analysis in the presence of creep.
I. Finnie. APPL. MECH. REV. 13: 705-712, Oct. 1960.

A review with 111 references.

DETECTION

207. Applications of signal detectability theory of psychophysical research: A bibliography.
C. D. Creelman. Ann Arbor, Mich., Michigan University, Department of Electrical Engineering, June 1960. 12p. (Tech. Memo. 79,2659-10-T) (Contract AF19(604)-2277) (AD-239 026) (PB148-802)

An attempt is made to give complete coverage with about 100 items of psychophysical studies conducted with, or related to, the framework of signal detectability theory. Arrangement is by books, articles, abstracts of papers, and technical reports. There are no annotations.

208. Predicting the detection range of a target in a moving field of view. A review of relevant research published prior to 1957.
A. Morris. San Diego, Calif., California University. Visibility Laboratory, Dec. 1959. 20p. (SIO Ref. 59-69) (Contract Nobs-72092) (AD-231 630)

The major references, numbering 76, which report experimental data on visual thresholds for static and moving targets are reviewed and discussed.

DIELECTRICS

209. Digest of literature on dielectrics, vl. 22, 1958. Prepared by the Committee on Digest of Literature of the Conference on Electrical Insulation, Division of Engineering and Industrial Research.
R. A. Soderman and L. J. Frisco, eds. Washington, D. C., National Academy of Sciences-National Research Council, 1959. 293p. (Pub. 713)

Subject breakdown by chapter is as follows: (each includes an extensive list of references) — instrumentation and measurements; table of dielectric constants; molecular and ionic interactions; conduction phenomena; ferroelectric and piezoelectric materials; ferromagnetic materials; rubber and plastic insulation; insulating films; insulating liquids and their applications; ceramic insulation; engineering applications.

DYES

210. Selective bibliography, the photochemistry of dyes.
K. D. Carroll, Sunnyvale, Calif., Lockheed Aircraft Corp., Missiles and Space Division, May 1959. 52p. (SB-59-51)

There are 288 entries, most of them from Chemical Abstracts. A few are annotated.

EDUCATION

211. Bibliography on cooperative education programs.
G. I. Chandler. Downey, Calif., Autonetics, Apr. 4, 1960. 23p. (Rept. EM-6066) (AD242 214)

A selective bibliography on cooperative engineering education in the United States is presented. There are approximately 100 references arranged in alphabetical order and followed by an author index. The bibliography is only partially annotated and covers information from 1908 through 1960.

212. Technical and vocational education in the U.S.A. A bibliographical survey, prepared by the U. S. Office of Education.
Paris, Unesco; London, H. M. Stationery Office, 1959. 24p. (Educational Studies and Documents 36)

The booklet is in five parts and lists separately publications dealing with general technical and vocational education, agriculture, distribution, home economics, and industrial education. There is an explanatory note to cover each publication described, stating briefly its contents and purpose.

ELECTRODES

213. Fused salt voltaic cells. An annotated bibliography of the technical literature concerning cell potentials.
W. C. Spindler and R. E. Panzer. Corona, Calif., Naval Ordnance Laborator, Jly. 31, 1959. 41p. (Rept. 457) (NAVORD 5957) (AD-225 203) (PB 171 114)

A bibliography of 85 articles pertaining to electrochemical cells utilizing fused salt electrolytes, with particular application to energy-producing voltaic cells. The literature cited includes material on voltaic and electrolytic cells; it does not include reference to the physical and chemical properties of fused salts.

214. The manganese dioxide electrode.
W. C. Vosburg. ELECTROCHEM. SOC. J. 106:839-845, Sept. 1959.

A review article bringing together some of the more recent contributions to the structure and properties of MnO_2 and the discharge mechanism of MnO_2 electrode. Includes 64 references.

ELECTRONICS

215. Bibliography on extra-high-voltage systems.
P. A. Abetti. POWER APPARATUS AND SYSTEMS 40:1517-1535, Feb. 1959.

A non-annotated listing, chronologically, of 839 references for the period 1946-1957, from more than 100 periodicals, published in 20 countries.

216. Electronic guide.
David Early, ed. Burbank, Calif., Electronic Guide Pub. Co., 1959. 191p.

This yearly guide is a concise and handy reference directory of articles in the fields of antennas and aerials; audio and high fidelity; automation and controls; electronic computers; instrumentation design; new developments; power supplies; radar and microwaves; radio and television; sonics and ultrasonics. The articles listed have appeared in about 50 periodicals published in 7 nations.

217. Soviet research in field electron and ion emission, 1955-1959; an annotated bibliography.
T. W. Marton and Ralph Klein. Wash-

ington, D. C., National Bureau of Standards, Oct. 1960. 41p. (Tech. Note 75) (PB 161 576) $1.25.

Contains 122 references. Topics include experimental and theoretical work on field electron emission from metals and semiconductors; work functions; phase transformations; absorption; diffusion; evaporation; surface ionization; and field ion emission. Complete reference to original publications in Russian, and Ukrainian, and to a few in Polish, Hungarian, and Czech, were selected after an extensive search of the literature. Full references are given to English translations of the entries whenever available. A list of relevant scientific meetings, references, and a brief subject index are appended to the compilation.

EMISSION

218. Electron emission processes bibliography.

R. G. Pohl and J. W. Buttrey. (In) Super Power Cathode Study, p. 1-328, Chicago, Ill., Armow Research Foundation, May 1960. (Sci. Rept. 1) (Rept. 1146-1) (Contract AF30(602)2043) (AD-238 963)

A comprehensive search of the literature for the years 1947 to 1960 is reported. Abstracts are generally given, and complete cross filing of a given reference into all pertinent subject categories was maintained. The punched card coding system used in compiling the search is described.

219. Field emission of electrons. A bibliography of abstracts.

H. Hanson and G. Riese. Los Alamos, N. Mex., Los Alamos Scientific Laboratory. Jly. 27, 1960. 115p. (Rept. 2385)

This bibliography is concerned with electron emission. The quality and techniques of both direct current fields and radio-frequency fields are included. The period covered is from the first observation of the phenomena in 1897 to the present. References are annotated, and are arranged alphabetically, then chronologically, beginning with the most recent.

220. A table of emission lines in the vacuum ultraviolet for all elements (6 angstroms to 2000 angstroms)

Raymond L. Kelly. Menlo Park, Calif., Stanford Research Institute, Jan. 1959. 524p. (UCRL 5612)

Contains all the published atomic emission lines contained in the literature up to January 1959. The literature references (811 items in all) are listed alphabetically on p. 509-520.

EXPLOSIVES

221. Annotated bibliography of HEP information. Basic HEP research and development program, volume I.

Irving Herman. Waterloo, Iowa, Chamberlin Corp., 1959. no paging. (Contract DA11-022-501-ord-2140) (AD-234 521)

This volume serves as an introduction and index to an annotated bibliography on high explosive propectiles. The bibliography, which includes classified reports, contains 1373 references, and is bound in volumes II through V (AD-315 942, AD-315 943, AD-315 944, and AD-215 945.) A uniterm system, which employs subjects, authors, and publications as uniterms, was used to index the bibliography. Included in this volume are instructions for the use of the system, alphabetical lists of subjects, authors, and publications; and uniterm cards which provide a cross reference.

222. Explosives—a bibliography.

C. J. Wensrich. Livermore, Calif., California University, Lawrence Radiation Laboratory, Jly. 1960. 21p. (Rept. 5545) (Contract W-7405-eng-48)

Not examined. Available at OTS $4.80 (ph); $2.70 (mf).

223. High-energy rate forming of metals.

H. P. Tardiff. Canada, Quebec Canadian Armament Research and Development Establishment, Aug. 3, 1959. 27p. (Tech. Memo. 290/59) (AD-241 982)

A general review with 98 references of a new metal-forming technique commonly called explosive forming.

224. High-impact metal forming 1957-1960. An annotated bibliography.

A. A. Beltran. Sunnyvale, Calif., Lockheed Aircraft Corp. Missiles and Space Division, Jly. 1960. 37p. (Rept. 703045) (SB-60-25) (AD-241 995)

Although explosive forming is the prime concern of this bibliography, reports on hydrospark forming, electro-discharge machining, impact extruding, and shooting of bolts into metals are included.

GASES

225. Annotated bibliography of permeation of gases through solids.

B. H. Nagel. Downey, Calif., Autonetics., Oct. 12, 1959. 158p. (Rept. EM-5883) (AD-242 210)

Emphasis is placed upon information concerning the gases hydrogen and helium, and the solids, metal and glass. Data on many other gases and solids is included. Abstracts are arranged chronologically, followed by a subject and author index. Coverage is 1900 through June 1959.

226. Bibliography on gas separation by centrifuge.

J. R. Thomas and G. I. Maughan. U. K. Atomic Energy Authority, Risley, Warrington, Lancs., Great Britain. 1959. 7p. (DEG Info. Series 48(R))

Sixty-one unclassified references have been selected from U.K.A.E.A. Abstracts Index, Nuclear Science Abstracts, Chemical Abstracts (1937-1959), and Science Abstracts Section A (1936-1958). Obtainable from British Information Services, N. Y., 21 cents.

227. Bibliography on gas temperature measurement.

E. McCoy. Great Britain. U. K. Atomic Energy Authority, Risley, Warrington, Lancas., 1959. 13p. (I. G. Info. Series 68 (RD/CA))

References to books, periodical articles, unclassified reports and patents are grouped by resistance thermometry; spectral methods; temperature probes; thermocouples; temperature measurement in flowing gases; and pyrometers. Obtainable from British Information Services, N. Y., 25 cents.

228. Fission gas generation and consequent high temperature irradiation effects on natural uranium, including creep properties. A literature search.

Myra Scott. Aiken, S. C., DuPont de Nemours and Co., Savannah River Laboratory, Dec. 15, 1959. 13p. (AECU-

4589) Available from OTS.

Sixty-four references were examined in a search of the foreign literature to determine the development status in the area of fission gas generation and its effects on natural U.

229. Purification of argon, helium, and xenon. A bibliography.

E. A. Cernak. Middletown, Conn., Pratt and Whitney Aircraft Division, United Aircraft Corp., Sept. 16, 1959. 19p. (Rept. CNLM-1802-2)

This bibliography contains 145 references on technology and apparatus used, arranged chronologically in four classifications. Period covered is 1945-Jly. 1959.

230. Release of inert gases from irradiated uranium.

D. L. Gray. Richland, Wash., General Electric Co., Hanford Atomic Products Operation, Jan. 1960. 21p. (Rept. 62629) Available from OTS.

A review of the literature, with ten references.

231. Study of gases in metals. A literature survey.

J. P. Pemsler. Concord, Mass., Nuclear Metals, Inc., Aug. 17, 1959. 51p. (Contract AF33(616)-6627) (Rept. 9800)

A literature survey of 123 references on thermodynamics of solution of oxygen, nitrogen, and hydrogen in niobium tantulum.

GEOLOGY

232. Bibliography of South Australian geology.

E. N. Teesdale-Smith. Sydney, South Australian Department of Mines and Geological Survey, 1959. 240p.

Includes all articles published through June 1958 on geology, geochemistry, geophysics, paleobotany, palaeontology and palynology, archaeology, geography, geomorphology, and pedology having a direct bearing on geology.

233. Selected annotated bibliography of the geology of uranium-bearing veins.

Basil Dean. Washington, D. C., Geological Survey, Feb. 1960. 109p. (GS-B-1059-G) Available from GPO.

This bibliography of 211 annotated references lists reports available as of June 1957.

HIGH TEMPERATURE

234. Bibliography on the higher temperature chemistry and physics of materials in the condensed state, covering the literature of Austria, Belgium, France, Germany, Japan, Scandinavia, United States, USSR.

Washington, D. C., National Bureau of Standards and International Union of Pure and Applied Chemistry, Commission on High Temperatures and Refractories, Sub-Commission on Condensed State, June 1960. 38p.

Approximately 250 non-annotated references are listed in subject arrangement, i.e., devices for achieving high temperatures, devices for measuring and controlling high temperatures; devices for physocal measurements at high temperatures; properties of refractory and non-refractory phases at higher and lower temperatures; phase equilibria; and reactions (physical and chemical) at high temperatures.

235. Development of improved metallic materials for electronic components operating at high temperature.

V. G. Mooradian. Union, N. J., Engelhard Industries, Inc., 1959. unpaged. (Bimon. Prog. Rept. 4) (Contract Nobs 77085)

A search of the literature yielded 20 references which are included.

236. Directory and bibliography of research on high-temperature condensed-states in Canada and elsewhere. N. F. H. Bright.

Canada. Department of Mines and Technical Surveys, Mines Branch Info. Cir. 117, 1960. 99p.

Contains many references.

237. High temperature strain and temperature sensing devices. A premiminary literature survey.

A. A. Beltran. Sunnyvale, Calif. Lockheed Aircraft Corp. Missiles and Space Division, May 9, 1960. 49p. (SB-60-3) (AD-240 655)

The 118 references cover briefly; measurement techniques; adhesives for the strain and temperature sensing instruments; and these instruments applied to beryllium, pyrolytic graphite, steel and titanium.

238. An investigation of intermetallic compounds for very high-temperature application.

Robert M. Paine, A. J. Stonehouse, and W. W. Beaver. Columbus, Ohio, Wright Air Development Center, 1959. 236p. (WADC TR-59-29(I))

Includes 598 references.

239. A survey of the basic scientific problems associated with the behavior of materials at high temperatures.

A. A. Westenberg. Silver Springs, Md. John Hopkins University. Applied Physics Laboratory, June 1959. 183p. (Rept. TG-333-1) (Contract Nord-7386) AD-219 986) (PB 150 155)

Contents: high temperature physical chemistry; reacting gas dynamics; chemical changes during nozzle flow in advance rocket engines; fluid dynamics of boundary layers; radiation; condensation; gas film cooling; internal cooling; erosion and deposition of solids; instrumentation; propellant chemistry, thermodynamics, and high-temperature material properties. Includes 245 references.

240. Thermocouples for high-temperature measurement. A bibliography.

A. C. Foskett. Harwell Berks. Great Britain. Atomic Energy Research Establishment. Jly. 1959. 17p. (AERE-Bib-125)

106 references covering the period 1954 to March 1959.

HUMAN ENGINEERING

241. Bibliography of publications relating to the small group.

Bertram H. Raven. Los Angeles, Calif., California University, Nov. 1959. un-

paged. (Contract Nonr-23354) (AD-233 320) (PB-150 498)

A bibliography of 1445 articles and books is presented. Reference concern group dynamics, theory, perception, social communication, reasoning, sociometrics, leadership, culture, behavior, personality, and learning. Order from LC mi. $6.00; ph. $18.30.

242. **Bibliography of research reports in psycho-physiological studies, 1955-1958.**
P. I. Sterling. Fort Knox, Ky., Army Medical Research Laboratory, Mar. 16, 1959. 15p. (Rept. 359) (AD-213 196)

Contains 143 references.

243. **A bibliography of small group research.**
Anita Terauds, Irwin Altman, and J. E. McGrath. Arlington, Va., Human Sciences Research, Inc., Apr. 1960. 220p. (Rept. RR-60/2-Gn) (AFOSR TN-60-365) (Contract AF49(638)256) (AD-237 304)

244. **Data on human engineering. What's available and where to get it.**
John Kolb. PROD. ENG. 31:71-74, Sept. 12, 1960.

A bibliography of the more generally useful and significant printed information.

245. **Documentation index and bibliography for study on human engineering of control systems.**
Minneapolis, Minn., Minneapolis-Honeywell Regulator Co., Aeronautical Division, Nov. 17, 1959. 41p. (Rept. 1508-TRI) (Contract Nonr-1076(00)) (AD-235 171)

There are 356 non-annotated references to research reports and journal articles.

246. **Human decision making as related to air surveillance systems.**
A. P. Chenzoff, I. Flores, et al. Stamford, Conn., Dunlap and Associates, Inc., June 10, 1960. 122p. (Rept. 300-1) (Tech. Rept. 1) (AFCCDD-TR-60-25) (Contract AF19(604)-6164)

A critical survey of literature and current research on decision making to identify available information and areas for further experimentation. Includes a mathematical bibliography (123 references); a psychological bibliography (146 references); a sociological bibliography (175 references); and a simulation bibliography (27 references).

247. **Human engineering bibliography, 1956--1957.**
Washington, D. C., Office of Naval Research, Oct. 1958. 360p. (ACR-32)

This is the first of a planned series of annual bibliographies. Two major considerations — ease of use and appropriate selection of material — strongly influenced this bibliography. As a result, five main parts exist: (1) a topical outline which defines over 300 topic headings established for this bibliography; (2) an index which associates the approximately 1400 bibliographic entries wth the topic headings; (3) an alphabetical index of the common search terms which would aid those using this bibliography but who are unfamiliar with the topic headings; (4) an annotated bibliography of some 1400 citations; and (5) an index of the authors of these citations.

248. **Human engineering bibliography, 1957-1958.**
Washington, D. C., Office of Naval Research and Tufts University, Institute for Applied Experimental Psychology, Oct. 1959. 316p. (ACR 43) (PB 161 125)

There are 1400 entries in this second annual summary.

249. **Human factors in remote handling: survey and bibliography.**
Wright-Patterson Air Force Base, Ohio, Wright Air Development Division, Behavorial Sciences Laboratory, Jly. 1960. 30p. (WADD TR-60-476) (AD-242 524)

The state of the art in remote handling is assessed and related to present and future advanced system requirements. A bibliography of 177 items representing a thorough screening of information sources in the United States, Canada, Great Britain, and France is included.

250. **Human resources research office bibliography of reports 30 June to 31 December 1959.**
Washington, D. C. George Washington University, Jan. 1960. 5p. (AD-233 059)

Includes publications on training on personal training, test methods, and training devices.

251. **Information input and processing variables in man-machine systems: a review of the literature.**
William C. Hewell and George E. Briggs. Columbus, Ohio, Ohio State University, Aviation Psychology Laboratory, Oct. 26, 1959. (NAV-TRADEVCEN 508-1) (Contract N61139-508) (AD-230 997)

Man's capacities to respond as a sensor and information processing element in complex control systems are reviewed. 245 references are included.

252. **Measurement and evaluation of organizational performance. An annotated bibliography.**
Paul Wasserman. Ithaca, N. Y., Cornell University, Graduate School of Business Administration, 1960. 110p.

A selected bibliography of about 400 books, articles and documents on general and theoretical measurement and evaluation; measurement of the total enterprise; measurement of functional units of organizations (accounting and finance, personal management, etc.); and measurement of individual performance.

253. **Selected bibliography of human factors reports.**
J. M. Huntingdon. Minneapolis, Minn., Minneapolis-Honeywell Regulator Co., Nov. 25, 1959. 21p. (Aero Doc. U-ED-6147) (AD1235 175)

Includes about 80 references with annotations.

254. **Self-instructional devices. A review of current concepts.**
William J. Carr. Lewisburg, Pa., Bucknell University, Aug. 1959. 23p. (WADC TR 59-503) (Contract AF(616) 6526) (AD-230 640) (PB 161 339)

A selective review, including 37 references, is presented with emphasis on those studied which provide for a functional analysis of such devices.

ICE

255. The absorptivity of ice: a critical review.
J. B. Lyone and R. E. Stoiber. Hanover, N. H., Dartmouth College, Oct. 31, 1959. (Sci. Rept. 3) (Contact AF19 (604)2159)

The literature (22 references) is critically reviewed in the light of new measurements made by the authors.

256. Bibliography on icing.
W. G. Hawk. Trenton, N. J., Naval Air Turbine Test Station, May 1960. 7p. (vl. VI, no. 6.)

A listing of reports on the subject available in the NATS Technical Library.

INFRARED

257. A far infrared bibliography.
E. D. Palik. OPT. SOC. AM. J. 50: 1329-1336 Dec. 1960.

This bibliography of about 500 references (no abstracts or annotations) is a collection of papers dealing primarily with the region between 25 and 1000 mu. The arrangement is chronological.

258. Infrared sensor development. Final report, 1 July 1958 - 30 June 1959.
Madison, Wis., Trionics Corp., Mar. 1960. 83p. (Contract AF33(616)5835) (AD-234 126)

Includes an extensive bibliography of 757 references.

259. Infrared spectra-structure correlations for organo-silicon compounds.
SPECTR. CHIM. 16.87-105, 1960.

Available experimental data (116 references) were used to prepare a chart correlating characteristic groups with absorption frequencies.

260. Iria special bibliography on rocket radriation characteristics.
W. L. Wolfe and F. E. Nicodemus. Ann Arbor, Mich., Michigan University, Willow Run Laboratories, Apr. 1960. 11p. (Rept. 2389-36-B) (Contract Nonr-1224(12)) (AD 235 850)

A preliminary bibliography listing 148 items of interest to infrared radiation is given.

261. A selected bibliography on infrared techniques and applications.
W. L. Wolfe. INST. RADIO ENGRS. PROC. 47:1647-1649, Sept. 1959.

Includes 101 non-annotated references covering text books, bibliographies, and general review articles, special topics in optics, spectroscopy, instrumentation detectors and properties of the atmosphere.

IONS

262. Ion exchange.
Robert Kunin. ANALYT. CHEM. 32: 67R-70R, Apr. 1960.

A review with 178 references.

263. A survey of the research of ionized media.
E. Atlee Jackson. Bedford, Mass. Air Force, Cambridge Research Center, Aug. 1959. (TR-59-174) (PB-144 382)

This survey of the literature shedding light on the dynamical or equilibrium properties of ionized media contains 167 references.

ISOTOPES

264. Bibliography of research on kinetic isotope effects.
Arthur Fry, Joe C. Wright, et al. Fayetteville, Ark., Arkansas University, Chemistry Department, 1959. 31p. (ORO-252) (Contract AT(40-1)-277) Available from OTS.

The bibliography contains 429 references classified as follows: general papers and review articles; carbon isotope effects; hydrogen isotope effects; isotope effects involving other elements; and related materials.

265. Bibliography of the pharmaceutical application of radioisotopes and ionizing radiation.
John E. Christian and William F. Bousquet. (In) Purdue University Research Foundation, Monthly Report 4. 19p., Lafayette, Ind., Sept. 10, 1959. (Contract AT(11-1)-737) (AECU-4338) Available from OTS.

266. A bibliography of radioisotopes.
Tokyo, Japan, National Diet Library, 1959. 25p.

A bibliography of 650 references is presented on radioisotopes and counting techniques in the fields of medicine, biology, physics, agriculture, engineering, chemistry, and instrumentation. The information appears in journals, progress reports, conferences, or patents.

267. Isotope separation by gaseous diffusion and centrifugation. A literature search.
J. M. Jacobs. Oak Ridge, Tenn., Atomic Energy Commission, Technical Information Service, May 1960. 19p. (TID-3554) Available from OTS.

A total of 141 references to the unclassified report and published literature are listed, without annotations, in two parts — gaseous diffusion and centrifugal methods.

268. Isotopes in catalysis
S. Z. Roginski. NOAWA TECH. no. 5: 7-28, 1959.

In Polish. Contains 127 references.

269. Special sources of information in isotopes.
Oak Ridge, Tenn., Atomic Energy Commission, Technical Information Service, Jan. 1, 1960. 54p. (TID-4563, 2nd rev.)

This is a guide to sources of information on radioisotope applications, availability, and potential value: and to sources of education material and programs of assistance and development.

270. Techniques for the study of self-diffusion in metals with the help of radioisotopes.
Claude Leymonie and Paul Lacombe. INTERN. J. APPL. RADIATION & ISOTOPES 5:175-196, 1959.

A discussion and critical review giving specific examples and including 29 references.

MACHINES AND MACHINING

271. Logical machine design: a selected bibliography.
Douglas B. Netherwood. INST. RADIO ENGRS. TRANS. EC-7:155-178, June 1958; EC-8:367-380,Sept. 1959.

A selection of current references, non-annotated, and numbering 777 in all. Includes an extensive index of significant title words.

272. Review of electrical matchining methods.
Max J. Trzeciak and Francis W. Boulger. Columbus, Ohio, Battelle MeMorial Institute, Defense Metals Information Center, Aug. 5, 1959. 14p. (Memo. 28) (AD-225 298) (PB 161 178)

This is a review of recent literature describing the application of electrical machinery methods. Included are 37 references.

273. Teaching machines: an annotated bibliography.
E. B. Fry, G. L. Bryan, and J. W. Rigney. Los Angeles, Calif., Southern California University, Department of Psychology, Nov. 1959. 106p. (Tech. Rept. 28) (Contract Nonr-288(02)) (AD-230 256)

This is an exhaustive compilation as of September 1959. Annotations are descriptive. References include discussions of programming, developmental and descriptive studies, training experiments, field surveys and theoretical discussions. A catalog of commercially developed teaching machines is included.

MAGNETIC DEVICES AND MATERIALS

274. Bibliography of digital magnetic circuits and materials.
Walter L. Morgan. INST. RADIO ENGRS. TRANS. EC-8-148-158, June 1959.

A list (non-annotated) of about 400 references relating to magnetic memory and logic circuits, divided into 19 sections.

A listing of sources of further information (conference proceedings, books, and other bibliographies) is included.

275. Bibliography on magnetic susceptibility: (1) Actinide elements, their alloys and compounds, and (2) methods and instrumentation.
J. Louie and R. D. Elliott. Los Alamos, N. Mex., Los Alamos Scientific Laboratory, Oct. 25, 1960. 98p. (Rept. 2457) (Contract W-7405-eng-36) Available from OTS, $2.25.

A two-part compilation of 217 reference with abstracts, with an author and a compound index.

276. Field distribution.
Ruth M. Hickerson. Los Alamos, N. Mex., Los Alamos Scientific Laboratory, June 19, 1959. 155p. (AECU-4248 (pts. 1-5)) (Contract W-7405-eng.-36)

330 references from various abstract journals are presented on static and time-variable electric and magnetic field distributions. Period covered is 1898-1958.

277. Magnetism and magnet properties.
D. I. Sweitzer. Pasadena, Calif., California Institute of Technology, Jet Propulsion Laboratory, Jan. 1960. 356p. (Astron. Info. Lit. Search 186) (Contract NASw-6)

An extensive bibliography of 1915 references, mostly annotated, covering the last five years. Arrangement is in nine groups relating to magnetic properties of various types of metals. There is an author index.

278. Meissner effect, pentration depth, and residual magnetism in superconductors.
J. Hayes, and E. Pereira. Pasadena, Calif., California Institute of Technology, Jet Propulsion Laboratory, Nov. 30, 1959. 85p. (Astron. Info. Lit. Seach 149) (Contract NASw-6) (AD-232 304)

Abstracts (451 in number) from periodical and report literature for the period 1948 to July 1959 are arranged alphabetically by author in each section.

279. Methods of measuring magnetic fields.
Edda Barber. Pasadena, Calif., California Institute of Technology, Jet Propulsion Laboratory, Mar. 3, 1960. 18p. (Lit. Search 195) (Contract NASw-6)

The 134 annotated references are divided into subject interests, as follows: I. A general section in which magnetometers using the Hall effects, peaking strips, the generator principle, and various fluxmeters are included; II. Magnetic resonance methods; III. Moving coil magnetometers; and IV. Airborne magnetometers.

280. 1957 magnetic amplifier bibliography.
AM. INST. ELEC. ENGRS. TRANS. 77: (Pt. 1. Comm. & Electron.) 1051-1057, Jan. 1959.

The bibliography of 314 items is divided into four major subdivisions as follows: (1) English language; (2) Foreign languages; (3) Domestic patents; (4) Foreign patents.

281. Relation between magnetism and electrical conductivity of compounds with transition elements.
F. Hulliger. HELV. PHYS. ACTA. 32. 615-654, 1959.

A review, in German, with many references.

MATERIALS

282. Bibliography, properties of refractory nuclear materials.
M. Comstock. Upton, N. Y., Brookhaven National Laboratory, Feb. 17, 1960. 18p. (TID-3906)

The literature for 1940-1959 was searched and 294 references relating to the chemical and physical properties of materials including the carbides, nitrides, oxides, and silicides of plutonium, thorium, and uranium are presented.

283. A conservation bibliography prepared by the Staff of the Army Library.
Washington, D. C., U. S. Department of the Army, Army Library, Jan. 1, 1959. 21p.

This annotated listing is divided into three sections: i.e., books, indexes and bibliographies, and periodicals. Prepared for the Office of Fuels, Materials and Ordnance, Office of the Director of Defense Research and Engineering, the publications cover conservation of items of interest to the office, namely strategic materials.

284. Electrophoretic deposition of insulating materials.
J. B. Dirks. (In) Progress in Dielectrics, ed. by J. B. Dirks and J. H. Schulman, vl. 1, p. 271-312, London, Heywood and Co., 1959.

90 references to scientific, technical, and patent litera-

ture are given.

285. Materials review no. 7.
A. Lyem. Army Chemical Center, Md., Army Chemical Warfare Laboratories, May 1960. 101p. (Spec. Pub. 4-18) (PB-161 971)

Three hundred and thirty articles from various journals have been abstracted. The review is broken down into five major headings: (1) high polymers, (2) plastic materials, (3) synthetic fibers, (4) metals and inorganic materials, and (5) miscellaneous and new concepts.

286. Materials testing (1950-1960).
Washington, D. C., Office of Technical Services, May 1960. 16p. (Selective Bib. SB-411)

A bibliography of reports listed in U. S. Government Research Reports and Technical Translations. The 248 references are arranged in categories as follows: nondestructive testing; ultrasonic testing; audioradiographic and radiographic testing; and materials testing, general.

287. Mechanical properties of structural materials at low temperatures: a compilation from the literature.
R. M. McClintock and H. P. Gibbons. Washington, D. C., National Bureau of Standards, June 1, 1960. 180p. (Monograph 13)

Based on a survey of over 100 references.

288. Mechanism of material transfer in porous sorbents.
D. P. Timofeev. USP. KHIM. 29:404-423, 1959.

A review, in Russian, of theoretical aspects and examination of the literature (134 references) on the mechanisms that may be effective in this phenomenon.

289. Progress in micro-indentation hardness testing.
H. Buckle. METALL. REVS. 4:1-47, 1959.

A survey based on 111 references. Definitions; apparatus; theory and variation of hardness with load relation between load and indentation diameter; technique of measurement; and applications.

290. Properties of refractory materials: collected data and references.
W. G. Bradshaw and C. O. Matthews. Sunnyvale, Calif., Lockheed Aircraft Corp., June 15, 1960. 114p., 2nd ed. (Rept. 2366) (PB 171 101, $2.50)

114 references are cited.

MATHEMATICS

291. Bibliography on sequential analysis.
J. Edward Jackson. Blacksburg, Va., Virginia Agricultural Experiment Station, May 1959. 50p. (Tech. Rept. 6) (Contract Nonr-235501) (AD-219 181)

This bibliography of 313 references is listed alphabetical by author and is also broken down into 14 subject categories.

MECHANICAL PROPERTIES

292. Bibliography on residual stress.
New York, Society of Automotive Engineers, Feb. 1959. 100p. (Suppl. 1, SP-167)

Available from the Society, 485 Lexington Avenue, N. Y.

References number 2033, for the period 1954-1956. There is a subject index.

293. Mechanical properties of intermetallic compounds. A review of the literature.
J. H. Westbrook. (In) Symposium on the Mechanical Properties of Intermetallic Compounds, Philadelphia, Pa., May 3-7, 1959, p. 1-70, New York, Wiley, 1960.

Includes 164 references.

294. Mechanical properties of irradiated solids.
F. A. Levi. NUOVO CIMENTO 12: 123-295, Suppl. 2, 1959.

A review (in Italian) of the literature dealing with radiation effects in solids includes 693 references published between Dec. 31, 1956 and Jan. 16, 1959.

295. Mechanical property survey of refractory non-metallic crystalline materials and intermetallic compounds.
W. D. Smiley, L. E. Sobon et al. Menlo Park, Calif., Stanford Research Institute, Jan. 1960. 308p. (WADC TR 59-448) (Contract AF33(616)5907) (AD-234 775)

The literature on the mechanical properties of nonmetallic polycrystalline compounds and intermetallic compounds with melting points above 1500° was surveyed. There are 1201 references cited.

MECHANICS

296. Literature survey on lateral instability and lateral bracing requirements.
George C. Lee. Bethlehem, Pa., Lehigh University, Fritz Engineering Laboratory, Oct. 1959. unpaged. (Lab. Rept. 205H. 2) (Interim Rept. 43) (Contracts N7 onr-39303, Nonr-61003) (AD-228 386)

Includes a listing of 115 references helpful for the lateral bracing problem.

297. Literature survey on the analysis and design of restrained columns.
Morris Ojalvo. Bethlehem, Pa., Lehigh University, Fritz Engineering Laboratory, Dec. 1959. 32p. (Rept. 278.1) (AD-233 729) (PB 152 143)

Includes 38 references that consider failure by excessive bending about one of the principal axes of the column section.

MECHANISMS

298. Sintering mechanism as applied to refractory oxides. A bibliography.
D. R. Wilder. Ames, Iowa, Ames Laboratory, U. S. Atomic Energy Commission, Jan. 1960. 51p. (ISC-288, Suppl. 2) Available from OTS.

Literature review citing 110 annotated references relating to sintering and grain growth, factors influencing sinterability and resulting properties of sintered compounds, covering period 1955-1959. This is the 2nd supplement to an original bibliography.

299. Trends in the kinematics of mechanisms.
Ferdinand Freudenstein. APPL. MECH. REVS. 12:587-590, Sept. 1959.

A review article including 71 references.

METALLURGY

300. Annotated bibliography.
W. D. Wilkinson. (In) Extractive and Physical Metallurgy of Plutonium and Its Alloys, Including a Special Introduction and Annotated Bibliography, p. 263-307, New York, Interscience Publishing Co., 1960.

An annotated bibliography of 233 references is given on plutonium metallurgy. The references are divided into 7 sections with the following headings: (1) safe handling and nuclear properties; (2) preparation of plutonium metal and compounds; (3) physical metallurgy of plutonium; (4) plutonium fuel elements and fabrication; (5) plutonium ceramics; (6) plutonium hydrometallurgy; and (7) pyrometallurgical reprocessing.

301. Bibliography of metallurgy of high purity tungsten, January 1911 through February 1959.
Washington, D. C., U. S. Bureau of Mines. 4p. (Info. Circ. 7953).

The aim of this bibliography has been to include only references that concern improving the purity of tungsten — from processing the ore to treating the finished metal. In this respect, it is a selected and not a critical bibliography. Because recent literature has the greatest value, most of the selected items refer to publications issued within the past five hears.

302. A bibliography on the application of electron-beam techniques in metallurgy.
R. F. Bunshah. (In) Vacuum Metallurgy Conference. Transactions 1959, p. 209-212, New York, New York University Press, 1960.

Some 75 non-annotated references are listed in five sections: general and miscellaneous, melting, welding, zone purification and crystal growth, and evaporation.

303. Non-ferrous metallurgy: review of applied analysis.
G. H. Farrah and M. L. Moss. ANAL. CHEM. 31:713-723. Apr. 1959.

Seventh review of literature (368 references) of analytical chemistry relating to non-ferrous metallurgy based on material received during 2-year period 1956-1958.

METALS AND METAL PROCESSING

304. Bibliography on mechanical finishing of metal surfaces.
Newark, N. J., American Electroplaters Society, 1959. 8p. (Res. Rept. 39)

Approximately 300 references (without abstracts) to literature of 1913 to 1956 inclusive, arranged in date order.

305. Bibliography on the cold forming of metals with special reference to cold heading, roll forming, and press-tool work.
Ottawa, Canada. National Research Council, Technical Information Service, 1959. 6p. (Pub. 69)

Lists textbooks, handbooks, technical articles, commerical bulletins and miscellaneous publications.

306. Less common metals.
E. M. Sherwood. INDUS. & ENG. CHEM. 51:1190-1196, 1959.

A review, with 359 references. For 1958 review see Indus. & Eng. Chem. 50:1454, Sept. 1958.

307. Literature survey on metal-organic compounds, properties, chemistry, preparation.
Tel-Aviv, Israel. Atomic Energy Commission, Feb. 1959. 43p.

338 references to published literature found recorded in Chemical Abstracts, 1921-1956.

308. Mercury, materials survey (with bibliography).
James W. Pennington. Washington, D. C., Bureau of Mines, 1959. 92p.

For sale by Supt. Documents.

309. Properties of metals and alloys at low temperatures.
Eduard Justi. Z. METALLK. 51:1-17, 1960.

Physical properties of metals and alloys, such as thermal condition, electrical resistance, magnetic resistance, and their temperature dependence are reviewed. 78 references are included.

310. 1958 review of metal processing literature (plastic working).
New York, American Society of Mechanical Engineers, 1959. 4p. (Paper 59-PROD-5)

Sheet rolling, cold working, warm working, hot working, and extrusion.

311. Pumps and electromagnetic flowmeters for liquid metals.
Harwell, Great Britain. Atomic Energy Research Establishment, May 1959. 26p. (AERE-Bib. 120)

152 references to reports, books, and journal articles, some with brief annotations, on electromagnetic pumps, mechanical pumps, and electromagnetic flowmeters. Supersedes a similar 1956 listing.

312. The rare-earth metals.
F. H. Spedding and A. H. Daane. MET. REV. 5:297-348, 1960.

A review with 340 references.

313. A review of metal-processing literature.
J. M. Galimberti, R. S. Hahn, and George Reichenbach. MECH. ENG. 81: 57-63, Sept. 1959.

Covers recent material on metal cutting, plastic working, and grinding.

314. Solidification of metals: general principles.
G. W. Form and J. F. Wallace. MOD. CASTINGS 37:145-156, Apr. 1960.

A critical review of the literature (65 references) covering liquid and solid states, freezing and nucleation of pure metals, growth of crystal nuclei, solidification of alloys (single-phase binary solid solution, and 2- phase eutectic), and contral of grain size.

315. A survey of the literature on the use of organometallic compounds in the preparation of ultra-pure metals.
W. A. Graham, Bedford, Mass., Arthur D. Little, Inc., Jly. 15, 1960. 41p. (ERD TN-60-768) (Sci. Rept. 1) (Contract AF 19(604)-4975) (PB 171 097)

Includes 122 citations.

316. Technical developments of 1959 (in metal finishing.)
N. Hall. MET. FINISHING 58:42-53, Jan. 1960.

Comprehensive survey of the technical and patent literature with 470 references. Includes pickling, polishing, anodizing, deposit adhesion, metallic coatings (No, Cu, Cr, Cd, Zn, and others), conversion films, corrosion preventitives, testing, and control waste treatment, etc.

317. Why metals break and what to do about it. D. Peckner.
MAT. IN DESIGN ENG. 51:127-152, Apr. 1960.

A summary of present knowledge. What is fracture? How does it occur? Fatigue failure, brittle failure, tensile and stress — corrosion failure, with practical examples of each and discussions of means of avoidance. A select bibliography of papers and books is included.

MICROSCOPY

318. Chemical microscopy.
Glenn Coven and Robert Cox. ANAL. CHEM. 32:87R-91R, Apr. 1960.

A review with 121 references.

319. Electron microscopy.
T. G. Rochow, A. M. Thomas, and M. C. Batty. ANAL. CHEM. 32:92R-103R, Apr. 1960.

A review with 198 references.

MICROSTRIPS

320. Microstrips 1950-1957.
N. M. Morris. New York Bell Telephone Laboratories, Technical Information Libraries, Publication Department, Jly. 1959. 7p. (Bib. 34)

This is a listing of 132 references to periodical articles, books, and federal government publications.

MINERALS

321. Graphite. A literature search.
T. F. Davis. Oak Ridge, Tenn., Atomic Energy Commission, Technical Information Service Extension, Oct. 1959. 80p. (TID 3532)

The majority of the 712 references pertain to reactor graphite, but here are some on manufacture and uses in other fields. Both AEC and non-AEC reports are included.

322. Properties of rutile (titanium dioxide).
F. A. Grant. Washington, D. C., National Bureau of Standards, Jan. 15, 1959. 242p.

A bibliography is included covering the following: properties; crystal structure, optical and dielectric properties; dielectric constant and loss angle; electric and thermal conductivity; transport phenomena in magnetic fields; magnetic and scattering phenomena; x-ray properties; and thermodynamic properties.

323. Selected annotated bibliography of gypsum and anhydrite in United States and Puerto Rico.
Charles F. Withington and Marion C. Jaster. Washington, D. C., Geological Survey, 1960. 126p. (Bull. 1105)

Contains more than 400 annotated references to January 1959 on geology, geographic occurrences, origin, technology, and uses. Available from GPO 0.50c.

324. Selected bibliography of andalusite, kyanite sillimanite, domortierite topaz, and pyrophyllite in the United States.
Agnes B. Grametbaur. Washington, D. C., Geological Survey, 1959. 973p. (Bull. 1019-N)

Contains 566 references, to December 31, 1958, on geology, mineral synthesis, geographic occurrence, and technology and uses. Available from GPO.

MOLDING

325. Bibliography on shell molding.
New York, Engineering Societies Library, Feb. 1959. 26p. (Bib. 13)

Lists over 200 annotated references to selected books, reports, bibliographies, and periodical articles, covering all aspects of the subject, including theory, technology, design, production practice in ferrous and nonferrous foundries, materials, testing methods, equipment, applications, and costs.

326. Production of castings in permanent molds.
G. M. Carr-Harris. CAN. MINING & METALL. BULL. 53:275-280, Apr. 1960.

Literature survey with 85 references, of permanent mold, semipermanent mold, ceramic mold, slush casting and gravity die-casting techniques.

NICKEL

327. Bibliography of references on electroless nickel plating.
C. F. (Waite. (In) ASTM Symposium on Electroless Nickel Plating (Catalytic Deposition of Nickel-Phosphorus Alloys by Chemical Reduction in Aqueous Solution), 67p., Philadelphia, Pa. ASTM, 1959. (Spec. Tech. Pub. 265)

Contains 131 items.

328. Effect of annealing on properties of nickel and nickel-base alloys.
London, Eng., Mond Nickel Co., Dec. 1959. 24p.

Abstracts of about 70 papers in chronological order from 1947 to 1959.

329. The effect of organic compounds on the codeposition of hydrogen with nickel.
Waco, Tex., Baylor University, Apr. 1960. 130p. (Tech. Rept. 1) (COR. Rept. 1747-2) (Contract DA23-072-ORD-1056) (AD-237 040)

Includes 100 references.

330. Electroforming of nickel. A bibliography.
London, Eng., Mond Nickel Co., Nov. 1959. 28p.

Abstracts of about 90 papers in chronological order from 1928 to 1959.

OIL

331. Additives for lube oil. A study of the market.
Houston, Tex., Science Information Association, 1959. 16p.

A 438 item bibliography with brief annotations is included.

332. Essential oils and related products.
Ernest Guenther, Kurt Kulka, and L.

A. Rogers. ANAL. CHEM. 31:679-687, Apr. 1959.

280 articles are listed in this review of analytical procedures covering the literature from September 1959 to August 1958.

OSCILLATORS

333. Bibliography on combustion-driven oscillations.
Abbott Putnam and Carl Speich. Columbus, Ohio, Battelle Memorial Institute, 1959. 33p.

A chronological listing of references beginning with 1940 and including 1959. No annotations.

334. Modern methods for measuring oscillator strengths.
H. van Regemorter, J. PHYS. ET RADIUM 20:907-914, 1959.

In French. A review and comparison of methods including an exhaustive bibliography giving data now available for each element.

OXYGEN

335. Atmospheric ozone, its detection, measurement, and effects, 1940 to 1959. An annotated bibliography.
A. A. Beltram. Sunnyvale, Calif. Lockheed Aircraft Corp., Missiles and Space Division, Jly. 1, 1960. 62p. (Rept. SRB-60-3)

This survey, including 154 annotated references, covers literature on detection, measurement and effects from 1940 to 1959. It is in two parts; arrangement is alphabetical by author.

336. Oxygen in steelmaking.
London, Eng., Iron and Steel Institute, 1959. 138p. (Bib. Series 22)

A 1946-1959 bibliography on the use of oxygen for pretreatment in the Bessemer converter, open-hearth furnace and for fume treatment, etc. Available for the Institute at 4 Grosvenor Gardens, London, S.W 1, England.

PHOTOGRAPHY

337. Bibliography of biological applications of autoradiography, 1958 through 1959.
Muriel E. Johnston. Livermore, Calif., California University. Radiation Laboratory; Aug. 1959. 23p. (UCRL-8901) (Contract W-7405-eng-48)

This bibliography of 281 references to report and periodical literature is a supplement to the one published July 1958 as UCRL-8400.

338. Photographic chemicals and emulsions.
Washington, D. C., Office of Technical Services, June 1960. 8p. (Selective Bib. 417)

A bibliography of 112 references, covering the period 1950 to July 1960, appearing in U. S. Government Research Reports and Technical Translations.

339. Special-effects cinematography: A bibliography.
Raymond Fielding. SOC. MOTION PICTURE & TELEVISION ENGRS. J. 69: 421-424, June 1960.

Books, research papers, articles in books and journals, optical printing and traveling mattes, miniatures, special-effects production, fundamentals of special- effects cinematography, etc.

POLAR REGIONS

340. El conocimiento geologico de la Antartida.
I. R. Cordini. Buenos Aires, Argentina. Instiuto Antartico Argentino, 1959. 161p. (Pub. 6)

Contains an annotated biblioghaphy of 293 references and a descriptive summary for the geology of Antarctica.

341. National interests in Antarctica. An annotated bibliography.
Robert D. Hayton (Hunter College) for the United States Antarctic Projects Officer, 1959. Washington, D. C., U. S. Govt. Print. Off. 1960. 137p. map.

Available from the Superintendent of Documents. Contains 1168 entries and covers official publications, books, pamphlets, and signed articles, as well as miscellaneous publications from 27 nations.

342. The polar biblography, volume III.
Washington, D. C., Library of Congress, Science and Technology Division, Aug. 15, 1959. 258p. (AFM-200-132) (Army DA Pam. 70-3) (Marine Corps NAVMC 1127) (OPNAV Ins. P-3470-3, Ch. 2)

This third volume of a series continues the listing with descriptive notes, of unclassified reports and other documents prepared by military agencies or their contractors, and issued since 1939. It includes all types of information relating to polar and subpolar regions, including data relating to man in a cold environment. vl. I was issued on Aug. 15, 1956, and vl. II on Mar. 15, 1957.

PROPULSION

343. Chemical fragments as ultra-energy propellants.
D. L. Wulff, Lillian H. Baum, and J. M. Fluornoy. Azusa, Calif., Aero-jet-General Corp., Nov. 1959. 60p. (Tech. Note 33) (AFOSR-TN-59-1249) (Abstracts Bull. 4) (Contract AF18-(603)-110)

Investigations have necessitated an extensive review of the literature (234 references) concerned with chemical fragments, embracing the related subjects of production, identification, stabilization, and determination of properties.

344. Low temperature starting and operation of compression ignition engines. A survey and bibliography.
W. E. Meyer, University Park, Pa., Pennsylvania State University, Oct. 15, 1959. various paging. (Contract DA 36-061-ORD-610) (AD-232 595)

An annotated bibliography containing 291 references is presented, supplemented by a subject index on the contents and significance of the more important references.

345. Marine gas turbine, free piston gas bibliography.
John W. Sawyer. AM. SOC. NAVAL ENGRS. J. 72:565-584, Aug. 1960.

This bibliography, covering technical papers and press releases during the period 1958-1959, includes some 130 summaries, 1100 subjects and over 3500 individual

references. Identification numbers have been assigned each abstract to permit easy reference between the subject index and the article summary.

346. Recent advances in space propulsion.
S. Sutherland. ARS J. 29:698-705, Oct. 1959.

150 references are listed covering chemical, nuclear, thermonuclear, arc heating, electromagnetic, electrostatic and solar propulsion; system analyses; space mechanics; and propulsion power sources.

RADAR

347. Radar bibliographie. Radar literatur der Letzten Funf Jahre. (Radar bibliography.. Radar literature of the last five years).
W. Reinhardt. Westdeutsche verlag, Koln und Opladen, June 1959. 103p. (DVL Bericht 73)

About 800 references to book and periodical articles, arranged by subject classification. Many English language titles appear as well as German. Period covered is 1953 to 1958.

348. A review of theories and measurements of radar ground return.
E. A. Wolff. Washington, D. C., Electromagnetic Research Corp., Feb. 29, 1960. 67p. (Sci. Rept. 1; CRC 5198-2) (AF CRC-TN-60-173) (AF19(604)5198) PB 146 911)

A summary, with 26 references, of the principal sea and ground clutter measurement programs. The present status of our understanding of ground return is reviewed.

349. Spurious echoes on radar, a survey.
V. G. Plank. Bedford, Mass., Cambridge Research Center, May 1959. 51p. (AFCRC-TR-59-210) (Geophysical Res. Papers 62)

Includes a bibliography of 126 non-annotated references.

RADIATION

350. Application of high energy radiations therapy.
S. V. Stephens and K. C. Tsien. Vienna, International Atomic Energy Agency, 1960. 86p.

A three-part bibliography including historical and general reviews, radioisotope teletherapy units, and supervoltage therapy with accelerators.

351. Atmospheric absorption of 10-400 kMcps radiation: summary and bibliography to 1960.
E. S. Rosenblum. Lexington, Mass., Massachusetts Institute of Technology, Lincoln Laboratory. Aug. 15. 1960. 22p., illus. (Rept. 82G-0021) (Contract AF19(604)5200) (AD-242 598)

The presently available data on atmospheric absorption is summarized, and the limitations of these data are explained. Emphasis is placed on absorption by normal molecular oxygen and water vapor; other contributing factors are considered only incidentally, if at all. The bibliography purports to cover all directly pertinent published experimental data, but attempts to be only representative in references to the theory and neglects many associated theoretical considerations which are pertinent in developing the theory. Some pertinent atmospheric data and a reminder of some of the characteristics of the attenuation curves are given.

RADIATION

352. Bibliography on effects of radiation on lubricants.
G. I. Maughan and E. Chaffin.Risley, Warrington, Great Britain. Atomic Energy Commission. 1960. 9p. (DEG. Info. Series 149(R))

A selected list of 84 unclassified references to the literature covering the effect of atomic radiation on lubricants and the development of lubricants which are radiation resistant. Sources searched were Nuclear Science Abstracts, Engineering Index, Applied Science and Technology Index. Available from H. M. Stationery Office.

353. Laboratory propagation and measurement of visible and near-infrared radiation. An annotated bibliography.
A. A. Beltran. Sunnyvale, Calif., Lockheed Aircraft Corp. Missiles and Space Division, June 13, 1960. 29p. (SRB-60-2) (AD-241 587)

This bibliography is concerned with sources of radiation in the region 4000 to 13000 A for use in laboratory testing of solar energy devices, also measurement of color temperature, intensity, and magnitude of radiation.

354. Radiation effects.
Albuquerque, N. Mex., Sandia Corp., Dec. 1959. 612p. (SCR-140)

This supersedes the bibliography of the same title in the Summer 1959 issue (item 65). It is greatly expanded, includes abstracts, and is presented in the following categories: dosimetry, health physics, and associated topics; electronic materials, components, and systems; metals, alloys, and ceramics; nuclear facilities and associated topics; organic chemical, including fuels, lubricants, and petroleum products; polymeric materials, including elastomers, plastics, and adhesives; propellents, evplosives, and associated topics; shielding; and a miscellaneous section.

355. Radiation effects on aluminum, elastomers, and lubricants. A bibliography.
E. A. Cermak. Middletown, Conn., Pratt and Whitney Aircraft Division, United Aircraft Corp., Apr. 4, 1960. 27p. (Rept. CNLM-1802)

This bibliography, which is limited to the period 1950-1959 includes references on radiation units and conversion factors.

356. Radiation effects on electronic circuits.
A. A. Beltran. Sunnyvale, Calif., Lockheed Aircraft Corp., Missiles and Space Division, Aug. 31, 1960. 43p. (SRB-60-4)

73 references, with annotations, covering reports and articles from 1956 through May 1960 are included, together with a subject index. Designing for radiation environments, shielding, reliability, tests procedures, and results are among the subjects included.

357. Radiation protection standards. A literature search.
W. E. Bost. Oak Ridge, Tenn., Atomic Energy Commission, Apr. 1960. 28p. (TID-3551)

Included are 296 references to reports and published literature written since 1957.

358. Radiation shields and shielding. A lit-

erature search.
H. D. Raleigh. Oak Ridge, Tenn., Atomic Energy Commission, Feb. 1960. 55p. (TID-3547)

The search, which resulted in 659 references, pertains chiefly to reactor shielding, but references on gamma and neutron attenuation, properties and effectiveness of shielding materials, biological shielding, shielding design, and theory are also included. Previous bibliographies on the same subject have been issued, the latest in Jly. 1956. TID 3303, available from OTS, $1.50.

RADIOACTIVE FALLOUT AND WASTE

359. Bibliography on radioactive decontamination of area and equipment.
G. I. Maughan. Risley, Warrington. Great Britain. Atomic Energy Authority, 1960. 14p. (DEG Info. Series 147 (R))

A selection of 124 unclassified references listed under books, reports, patents, and journal references.

360. Bibliography on radioactive fallout.
(In) Fallout From Nuclear Weapons Tests. Hearings Before the Special Subcommittee on Radiation of the Joint Committee on Atomic Energy, Congress of the United States, Eighty-Sixth Congress, First Session on Fallout From Nuclear Weapons Tests, May 5-8, 1959, vl. 3, p. 2578-2618, Washington, D. C., Joint Committee on Atomic Energy, 1959.

Includes 543 references on the dispersal and fallout of radioactive debris from nuclear explosions.

361. Fixation of fission products. A literature search.
T. F. Davis. Oak Ridge, Tenn., Atomic Energy Commission, Technical Information Service, May 1960. 12p. (TID-3553)

The 94 non-annotated references have been listed as a guide to serve in the field of fission product fixation in ceramics, glasses, and various other solid media. Calcination, although closely related, has not been included.

362. Radioactive fallout, a bibliography of selected United States Atomic Energy Commission reports.
H. E. Voress, R. J. Smith, and J. M. Jacobs. Oak Ridge, Tenn., Atomic Energy Commission, Technical Information Service, Aug. 1959. 74p. (TID-3087)

A total of 365 annotated references is presented on the physics and chemistry of fallout, its effects upon human life, and all other major aspects of the subject. Author, subject, and report number indexes are provided.

363. Radioactive waste processing and disposal. A literature search.
T. F. Davis. Oak Ridge, Tenn., Atomic Energy Commission, Technical Information Service, June 1960. 92p. (TID-3555)

Consists of 696 references prepared as a supplement to the bibliography entitled "Radioactive Waste Processing and Disposal" issued in 1958. References have been taken from Nuclear Science Abstracts for the period January 1958-May 1960.

364. Remote-control equipment. A literature search.
H. D. Raleigh. Oak Ridge, Tenn., Atomic Energy Commission, Technical Information Service, Mar. 1960. 20p. (TID-3549)

Included are 149-annotated references on equipment used in operations that take place under highly radioactive conditions. The majority of the references pertain to equipment used in hot laboratories, but also covered are reactor fuel element handling equipment, nuclear aircraft maintenance equipment, and servomechanisms.

365. Shipping and storage of radioactive materials. A literature search.
T. F. Davis. Oak Ridge, Tenn., Atomic Energy Commission, Technical Information Service, Apr. 1960. 22p. (TID-3552)

A list of 145 references on storage and handling as well as criticality and shielding.

RADIOCHEMISTRY

366. Behavior of carrier-free tracers (a bibliography of unclassified references.
M. Kahn, K. H. Jones, and K. Lawson. Los Alamos, N. Mex., New Mexico University, June 28, 1960. 127p. (Rept. LA-2331UNM)

This bibliography contains 1216 references (no annotations) to unclassified work. Information is included on the preparation, precipitation, adsorption, emanation, diffusion, solvent extraction, volatilization, oxidation-reduction, and electrolysis of carrier-free tracers. References were obtained from Chemical Abstracts and Nuclear Science Abstracts, 1950?1957, inclusive.

367. Selected abstracts of atomic energy project unclassified report literature in the field of radiation chemistry and bibliography of the published literature. 3rd annual supplement.
R. W. Clarke. Harwell, Berks. Great Britain, Atomic Energy Research Establishment. Jly. 1959. 402p. (AERE C/R 1575 (1 to 6), Suppl. 3)

This extensive bibliography of some 1500 items (partially annotated) is divided into 6 sections with subject headings as follows: theory, interpretation, water, and aqueous inorganic systems; organic compounds (including polymerisation reactions); gaseous systems (excluding organic compounds); solid systems (excluding organic compounds); biochemistry and radiobiology (excluding animal studies, including irradiation of foodstuffs, bacteria, insects, etc.); miscellaneous (including colloids, corrosion, industrial applications of radiation, irradiation equipment, general reviews and reports, etc.). Available from H. M. Stationery Office. For earlier listing, see Item 95, Fall 1959 issue.

368. Selected abstracts of atomic energy project unclassified report literature in the field of radiation chemistry and bibliography of the published literature. 4th annual supplement.
R. W. Clarke. Harwell-Berks. Great Britain, Atomic Energy Research Establishment. Aug. 1960. 497p. (AERE C/R 1575 (1-6), suppl. 4)

Includes 2272 references (some with abstracts).

369. Source material for radiochemistry.
Subcommittee on Radiochemistry, Committee on Nuclear Science. Washington, D. C., National Academy of Sciences, National Research Council, Mar. 1959. 23p. (Nuclear Sci. Ser. Rept. 27)

Includes references, with annotations, to documents and periodical articles of a review nature.

REACTORS

370. Bibliography of Canadian heavy water reactor technology.
S. J. Townsend. Chalk River, Ont., Atomic Energy of Canada, Ltd., May 1959. 17p. (AECL-730)

A bibliography of Canadian publications which report construction and operation of heavy water reactors from 1952 to the present is presented, with 175 references.

371. A bibliography on boiling water reactors.
G. I. Maughan. Risley, Warrington, Great Britain, Atomic Energy Authority, 1959. 35p. (I. G. Info. Series 54 (RD/R))

269 non-annotated references to book, report, and periodical literature selected from Nuclear Science Abstracts (1948-Feb. 1959) and Engineering Index (1960-1957). Available from British Information Services, New York.

372. Bibliography on general test reactors.
Dorothy M. Duke. Lynchburgh, Va., Babcock and Wilcox Co., Sept. 1959. 48p. (TM 321)

References on the MTR, ETR. G. E. Materials Testing Reactor, Vallecitos Boiling Water Reactor, and Westinghouse Testing Reactor are presented. Also included are reference on miscellaneous reactors and inpile loops.

373. Bibliography on nuclear reactor fuel reprocessing and waste dispostal. Volume 2, Fission product, poison, and radioscope removal.
T. F. Connolly. Oak Ridge, Tenn., Oak Ridge National Laboratory, Oct. 18, 1960. 152p. (ORNL-2971, vl. 2)

Material is divided according to elements and methods. All references have detailed annotations.

374. Bibliography on plutonium build-up in reactors.
B. Yates and G. I. Maughan. Risley, Warrington, Great Britain, Atomic Energy Authority, 1959. 10p. (DEG-23(R))

This is a selection of 62 references, with brief annotations, from 1940- 1957.

375. Bibliography on plutonium fuelling and cycling.
G. I. Maughan. Risley, Warrington, Great Britain, Atomic Energy Authority, Oct. 1959. 9p. (DEG Info. Series 41(R))

Physical aspects of the use of plutonium as a nuclear reactor fuel are covered in this 65-item annotated listing of open literature references. Available from British Information Service, New York, 21 cents.

376. Boiling water reactors. An annotated bibliography of selected literature.
James M. Jacobs. Oak Ridge, Tenn., Atomic Energy Commission, Technical Information Service, June 1959. 48p. (TID-3088)

A total of 253 references to the unclassified report and published literature, covering all phases of the development of heterogenous and homogeneous boiling water reactors is presented. Author and subject indexes are included.

377. Fuel breeding, a literature search.
James M. Jacobs. Oak Ridge, Tenn., Atomic Energy Commission, Technical Information Service, Aug. 1959. 72p.

A compilation is presented of selected references to data on breeding theory, breeder element and blanket design and fabrication, breeder reactor and breeder reactor fuel elements. There are 696 references to unclassified reports.

378. Gas-cooled reactors: bibliography.
William H. Richardson and Frances Strachwitz. Albuquerque, N. Mex., Sandia Corp., Sept. 1959. 213p. (Rept. 86)

This is a compilation of 517 references to articles, reports, books, and patents to May 1959. Reactors cooled by air are included, as well as all types of reactors by function — power reactors, research reactors, design studies, and prototypes.

379. Industrial process and space heat from nuclear reactors. A literature search.
J. M. Jacobs. Oak Ridge, Tenn., Atomic Energy Commission, Technical Information Service, Oct. 1959. 9p. (TID 3537)

Forty-five references to the report and published literature are listed.

380. Les sels fondus dans les reacteurs nucleaires (bibliographie). (Molten salts in nuclear reactors. Bibliography).
J. Dirian and R. Saint-James. Paris, France, Commissariat a l'Energie Atomique, 1959. 33p.

References deal with the physico-chemical studies of fused salts, in particular, the alkali and alkali earth hadides, also corrosion of materials by these salts and the treatment of the salts with a view to recovery after irradiation in a nuclear reactor.

381. Organic coolants and moderators for nuclear reactors. A literature search.
E. U. Kauer. Aiken, S. C., DuPont de Nemours (E. I.) and Co., Savannah River Laboratory, Dec. 1959. 19p. (AECU-4590)

A literature search of Nuclear Science Abstracts vls. 12 and 13, for information or organic coolants and moderators is presented. Properties of biphenyl, diphenyl methane, Dowtherm A, a-phenyl napathalene, and terphenyl (o, m, p and technical grade) are considered.

382. Pressurized water reactors, literature search.
S. F. Lanier. Oak Ridge, Tenn., Atomic Energy Commission, Technical Information Service, June 1959. 31p. (TID-3530)

Available from OTS.

383. Reactors kinetics. A bibliography.

M. Bloomfield and F. G. Bennett. IV Canoga Park, Calif., North American Aviation, Inc., Atomics International Division, Nov. 1, 1959. 52p. (NAA-SR-3808.)

This is a non-annotated listing, in subject groups, of several hundred reports listed in Nuclear Science Abstracts and Abstracts of Classified Reports up to July 1958 (classified reports are included but none have classified titles). There is an author index and a report index which is convenient for checking all of one company's reports on this subject.

384. Reactor safety. A literature search.
Richard J. Smith. Oak Ridge, Tenn., Atomic Energy Commission, Technical Information Service, Nov. 1959. 41p. (TID-3525, rev. 1)

The 269 references include information on reactor systems, materials, and operation. This is a revision of Item 110 appearing in the Bibliography Digest Fall issue, 1959.

385. Reprocessing of irradiated fission reactor fuel and breeding material. A literature search.
J. M. Jacobs. Oak Ridge, Tenn., Atomic Energy Commission, Technical Information Service, Jan. 1960. 39p. (TID-3529, rev. 1)

This revision of the same title, dated November 1958 (Item 94, Fall 1959 issue) adds 363 references to the listing of unclassified reports on the subjects.

386. Review of research on non-destructive analysis of reactor fuel elements. A study.
S. L. Ruby and D. G. Gardner. Vienna, International Atomic Energy Agency, 1959. 41p. (STI-DOC/10)

A selected bibliography is presented on the nondestructive assay of irradiated and unirradiated reactor fuel assemblies. The bibliography also includes a discussion and evaluation of these papers in the light of the problems presented by variations in enrichment, alloying, cladding, geometrical arrangement, etc., among the many kinds of fuel assemblies.

387. Survey and selected bibliography of reactor fuel element assay systems, nuclear materials control system (NMCS). Phase II.
S. L. Ruby and D. G. Gardner. Pittsburgh, Pa., Westinghouse Electric Corp., Atomic Power Department, June 19, 1959. 41p. (WACP-6014) (Contract AT(301-)-2152)

Available from Office of Technical Services, mf $3.00, ph $6.30.

RELAYS

388. Bibliography of relay literature 1955-1956.
Subcommittee on Bibliography of Relay Literature of the AIEE Committee on Relays. POWER APP. & SYS. 41:78-81, Apr. 1959.

This is a continuation of similar bibliographies on relay literature previously published in AIEE Transactions. Papers listed include English language references to service restoration, testing, system stability, methods of calculation, instrument transformers and other auxiliary devices as well as the field of relaying.

389. Bibliography of relay literature 1957-1958.
Subcommittee on Bibliography of Relay Literature of the AIEE Committee on Relays. POWER APP. & SYS. 47:39-42, Apr. 1960.

This is a continuation of similar bibliographies on the subject published in earlier volumes of AIEE Transactions. Listing of titles is subdivided into 12 sections, viz., line protection-distance relaying, pilot wire, carrier and microwave ground relaying, general, but protection, apparatus protection, distribution and network protection, service restoration, general and miscellaneous relaying, testing and analyzing, methods and calculations, and electronic relays.

RELIABILITY

390. Annotated bibliography on statistical approach to reliability.
B. H. Nagel. Downey, Calif., Autonetics, Mar. 18, 1960. 107p. (Rept. EM-6024) (AD-242 212)

Literature published primarily between 1957 and 1959 was surveyed and a collection of over 200 annotated references is presented on statistical methodology as applied to reliability. The abstracts are arranged chronologically followed by a subject and author index.

391. Reliability and equality control (1950-1960).
Washington, D. C., Office of Technical Services, Apr. 1960. 9p. Selective Bib. 405)

A bibliography of reports listed in the two OTS monthly abstract journals: U. S. Government Research Reports, and Technical Translations.

RESEARCH

392. Bibliography on the economics and social implications of scientific research and development.
Washington, D. C., National Science Foundation, 1959. 53p. Available from GPO.

A selected annotated compilation of references representative of various approaches to the study of research and development. Subject groupings are nature, philosophy, and history of science and technology; expenditure and man-power statistics on research and development; social and institutional framework; patents and inventions; administration and management of industrial research; economc and social implications; and other bibliographies.

393. The image furnace as a research tool.
N. K. Hiester and R. E. De La Rue. ARS J. 30:928-938, Oct. 1960.

A guide to the literature, with 86 references, covering some of the important theoretical and practical aspects of image furnaces and their operation.

394. Operations research: an annotated bibliography.
James H. Batchelor. St. Louis, Mo., St. Louis Universiy Press, 1959. 2nd. ed., 866p. $10.00

Coverage through 1957 is quite complete (6000 items) except for linear programming which is already covered by other bibliographies. There is an index. About 4000 references are fully abstracted.

SEALS

395. Design handbook for O-rings and sim-

ilar elastic seals.
Frank W. Tipton. Seattle, Boeing Airplane Co., Sept. 8, 1959. 71p. (Contract AF33(616)-5722)

A bibliography of published articles pertinent to O-ring seals is included.

SHELLS (Structural)

396. Stresses in shells.
Wilhelm Flugge. Berlin, Springer-Verlag, 1960. 499p.

Bibliography, p. 482-494.

397. Thin shells: some basic references for architects and engineers.
M. P. Levy. ARCH. REC. 125:224-225, June 1959.

SPECTROSCOPY

398. Absorption spectroscopy in liquid anhydrous hydrogen fluoride.
Angelo Tulumello. Lafayette, Ind., Purdue University, 1960. 10p.

Includes a literature survey record of 25 references.

399. Bibliography on analytical flame spectroscopy, 1956-Mar. 1959. Part III.
R. Mavrodineanu. APPL. SPECTROSCOPY 14:17-23, 1960.

Continued from 13:132-139, 149, 155, 1959. (Item 44, Spring 1960 issue).

400. Emission spectroscopy.
B. F. Scribner. ANAL. CHEM. 32:229R-239R, Apr. 1960.

A review with 282 references.

401. Mass spectroscopy in nuclear chemistry.
H. G. Thode, C. C. McMullen, and K. Fritze. (In) Advances in Inorganic Chemistry and Radiochemistry, H. J. Emeleus and A. G. Sharpe, eds., vl. 2, p. 315-363, New York, Academic Press, 1960.

Important developments in nuclear chemistry in which mass spectrometers have played a role are reviewed. 126 references are cited.

402. Recent developments in molecular spectroscopy in the U.S.S.R.
B. S. Neporent. OPT. SOC. AM. J. 50: 411-417, Apr. 1960.

A review article that serves as a guide to the modern Russian literature to which 153 references are given, the majority in Optika i Spektroskopia and hence available in translation. The subjects dealt with are vibrational, Raman and electronic spectra with particular emphasis on fluorescence, on crystals in which the spectra of individual molecules is still discernable, on the spectra of glasses and of aromatic hydrocarbons and on the importance of intra-rather than inter-molecular processes in determining the structure of bands.

403 Vacuum ultraviolet spectroscopy. Bibliography.
Marjorie Comstock. Upton, N. Y., Brookhaven National Laboratory, Aug. 5, 1960. 23p. (TID 3905)

Literature was searched from 1907-June 1960 for references relating to instrumentation and measurement in the region 2500A-10A. 364 references are cited in this publication.

SPRAYS

404. Accelerated corrosion (salt spray) testing.
A. Frank. PLATING 47:623-631, June 1960.

A history of the 46-year-old salt spray test is presented, with a long bibliography.

405. Spray literature abstracts.
K. J. DeJuhasz, E. A. Scicchitano et al. New York, American Society of Mechanical Engineers, 1959. 384p.

The compilation comprises over 1300 annotated items collected from the technical literature of 24 countries, published from 1880 to 1958 inclusive. Entries include items on atmospheric, agricultural, fire-fighting and military sprays, as well as sprays for industrial processes, furnaces, internal combustion engines, gas turbines, and rockets.

STATISTICS

406. A bibliography of publications in the theory of games.
H. S. Schloss. Boston, Mass., Northeastern University, Oct. 23, 1959. 97p. (AFCRC-TN-59-797) (Sci. Rept. 1) (Contract AF19(604)-4573) (AD-234 153) (PB 146 648)

An alphabetical listing, by author, of about 1400 references compiled by examining Mathematical Reviews from 1944 to the present, Operations Research, Annals of Mathematical Statistics and existing bibliographies. There are no annotations.

407. Bibliography on the use of simulation in management analysis.
D. G. Malcolm. OPERATIONS RES. 8:169-177, Mar/Apr. 1960.

A non-annotated listing of about 175 references arranged alphabetically by author, in several sections, viz., simulation-industrial; simulation-military; games-industrial; and games-military.

408. Selected bibliography of statistical literature, 1930 to 1957. I. Correlation and regression theory; II. Time series.
Lola S. Deming. J. RES. (NBS) 64B:55-76, 1960.

References and titles of important contributions in the two fields have been taken from technical journals published throughout the world since 1930.

409. Statistical inference for Markov chains and progress bibliography.
Eugene, Ore., Oregon University, Aug. 30, 1960. 7p. (Tech. Rept. 1)

A listing, only, of 66 references, in alphabetical order, by the author.

STEEL

410. Bibliography on low temperature characteristics of steel, 1904-April 1960, with author index.
K. J. Faber. New York, The International Nickel Co., 1960. 3rd ed., 107p.

There are 1227 references in this listing; no annotations.

411. Review of iron and steel literature for 1959.
Esther Cheshire. BLAST FURNACE & STEEL PLANT 48:472-473, 496-500, May 1960.

Extensive literature survey covering ores, refractories and most aspects of steelmaking. This is the forty-third annual review.

412. A summary of comparative properties

of air-melted and vacuum-melted steels and superalloys.
D. C. Ludwigson and F. R. Morral. Columbus, Ohio, Defense Metals Information Center, Mar. 28, 1960. 144p. (Rept. 128) (Contract AF 18(600)1375) (AD-237 675)

58 references are included in this compilation of data for low alloy steels, hot-work die steels, stainless steels, iron-base superalloys, nickel-base superalloys, and cobalt-base superalloys.

TIME REVERSAL

413. Time reversal. A bibliography.
H. Coblans. Geneva, European Organization for Nuclear Research, Scientific Information, May 30, 1959. 15p. (CERN Bib. 4)

Papers are included which have appeared in the scientific press, the proceedings of conferences, and reports noted in Nuclear Science Abstracts.

TITANIUM

414. Analytical chemistry of titanium metals and compounds.
M. Codell. New York, Interscience Publishers, 1959. 378p.

A bibliography of 233 rferences, with author and subject indexes is included.

415. Properties of titanium and its alloys.
E. M. Savitski and M. A. Tylkina. (In) Khimiya Metallovedenie i Obrabotka Titana, N. V. Ageef, ed., p. 103-162, Moscow, Izdatel'stvo Akademii Nauk SSSR, 1959.

In Russian. A literature review with 126 references.

416. Titanium directionality program. Phase I. Literature survey.
R. H. Hicks. Midland, Pa., Crucible Steel Co. of America, Jan. 7, 1959. n.p. (Interim Rept. 1) (Contract AF33(600) 37938) (AD-212 061)

20 references on data and theories concerning the cause and reduction of directionality due to straight line rolling.

TRANSDUCERS

417. Searching the literature for transducer information: Part I. A guide to the literature.
J. Pearlstein. Washington, D. C., Diamond Ordnance Fuze Laboratories, Oct. 15, 1959. 61p. Tech Rept. 753) (PB 161 320)

This report provides a guide (but no references) to the technical literature on transducers, including a classification of the related phenomena, principles, and materials which must be considered in any broad and systematic research and development program on these devices. This work has been done in connection with the establishment at DOFL of a center for the "acquisition, coordination, and extension of transducer information" on an Ordnance-wide basis.

418. Some notes on the history of parametric transducers.
W. W. Mumford. INST. RADIO ENGRS. PROC. 48:848-853, May 1960.

The history of the development of parametric principles and devices, from 1831 to the present, is summarized in this review. The chronology presented is supported by 200 selected references.

TRANSPORTATION

419. Time lag systems — a bibliography.
N. H. Choksy. INST. RADIO ENGRS. TRANS. AC-5:66-70, Jan. 1960.

218 articles are listed. They are in addition to those listed in "Transportation Lag — An Annotated Bibliography," by Robert Weiss (See 13-87).

420. Transportation literature.
K. L. Taylor. SPEC. LIBS. 50:64-71, Feb. 1959.

Significant books, pamphlets, and periodical articles.

421. Unitization in maritime transportation. An annotated bibliography.
Washington, D. C., National Academy of Sciences. National Research Council, 1960. 44p. (Pub. 795) (AD-244 090)

Subjects covered in this annotated bibliography are principles and analyses of unitized operation; descriptions of unitized operations; design, types and sizes of containers and pallets; ship design; port facilities; transfer devices and systems; and rail and truck unitized services.

TROPOSPHERIC PROPAGATION

422. Survey of Central Radio Propagation Laboratory research in tropospheric propagation, 1948-1956.
J. Herbstreit and P. L. Rice. Boulder, Colo., National Bureau of Standards, Sept. 1959. (Tech. Note 26) (Rev. of NBS 3520)

Abstracts and summaries of 360 publications concerned with the National Bureau of Standards tropospherical propagation research program.

URANIUM

423. Bibliography of U. S. Geological Survey report on uranium and thorium, 1953 through May 1958.
Paul E. Soister and Dora R. Conklin. Washington, D. C, U. S. Geological Survey, 1959. 167p. (Rept. B-1107-A)

424. Literature survey on grain-size in uranium.
Tel-Aviv, Israel, Atomic Energy Commission, Jly. 1959. 15p. (Rept. LS-59)

A bibliography of 173 references is presented on grain size in U. The references were collected from Nuclear Science Abstracts 1948-1959, and reports in the Israel Atomic Energy Commission Library.

425. Uranium extraction is USSR. An organized review of the published Soviet literature for 1930-1958.
A. M. Gaudin and L. T. Romankiv. Cambridge, Mass., Massachusetts Institute of Technology, Apr. 30, 1959. 75p. (Rept. NP-8239)

Included in this survey are the following topics: physical and physiochemical concentration methods, chemical concentration methods, properties of uraniferous solutions, and methods of analysis for uranium.

426. Uses of depleted uranium.
J. E. Donahue and A. E. Higinbotham. Oak Ridge, Tenn. MIT Engineering Practice School, Nov. 5, 1959. 32p. (Rept. OR-5) (Contract W-7405-eng.-26) Available from OTS.

In connection with an extensive search of the literature for non-nuclear applications of uranium and its compounds, a series of bibliographies was compiled for each proposed application. Included in this report.

VACUUM MELTING

427. The theory and practice of vacuum melting.
O. Winkler. METALL. REVS. 5:1-117, 1960.

A long and detailed survey based on over 100 references.

428. Vacuum arc melting: a bibliography.
E. A. Cernak, J. Doyle, and S. Aconsky. Middletown, Conn., Pratt and Whitney Aircraft Division, United Aircraft Corp., Mar. 16, 1960. 74p. (Rept. CNIM-1802-11)

A bibliography, containing 334 references, from papers published from 1945 to 1959 is presented on the consumable and nonconsumable electrode vacuum arc melting process. Electrode preparation, furnace construction and operation, melting, sintering, vacuum techniques, and theory are considered.

VIBRATION

424. Vibration studies in the Soviet Union. A review.
Yu. I. Iroish. AKUST. ZHURN. 5:263-274, 1959.

In Russian. English trans. in Soviet Phys. Acoustics 3:263-274, 1959. In this review article dealing with Soviet work on the harmful effects of vibration, there is a 146-item bibliography arranged in alphabetical order by the author. Specifically dealt with are vibration measurement; testing, including generation of vibrations for experimental purposes; insulation; and the effect of vibrations on instruments.

VISCOSITY

425. Viscosity of molten masses.
G. Bieler. INDUS. CERAM. no. 505:43-49, 1959.

A review article with 30 references. Theoretical and experimental considerations of glasses, glazings, enamels, and slags are covered.

ZINC

426. Attack of molten zinc on iron: a survey of knowledge.
K. Ruttewit. METALL. 13:735-738, Aug. 1959.

A survey based on 35 references.

427. Zinc.
Giovanni Rolandi. INDUS. MINERARIA (ROME) 10:191-207, 327-341, 579-488, 641-665, 787-800, 1959.

A review with many references.

ZIRCALOY

428. Bibliography on welding of zircaloy-2.
G. I. Maughan. Risley, Warrington, Great Britain. Atomic Energy Authority, 1960. 4p. (DEG. Info. Series 93(R))

There are 40 report and journal references to the welding of zircaloy to similar and dissimilar metals taken from Nuclear Science Abstracts, Engineering Index, and Metallurgical Abstracts.

429. Review of the properties of zircaloy-2.
G. E. Zima. Richland, Wash., Hanford Works, Oct. 14, 1959. 100p. (Rept. 60908)

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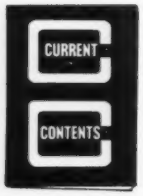

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Petrol Press Service
Petrol. Refiner
Reyon Zellwolld Chemiesfasern
SLA Bus. & Fin. Div. Bul.
SLA Council Phila & Vicinity Bul.
SLA N.J. Chap. Bul.
SLA Pitts. Chap. Bul.
SLA S. Calif. Bul.
Sp. Lib.*
Systems*
Tid. Dok*

ABSTRACTING AND INDEXING

112. A.S.M. documentation service.
Marvin Metzger. METAL PROGR. 79(1): 132, 135A Jan. 1961. Editor's reply: ibid., 79(1):135A,136 Jan. 1961.
Comments on information in annotations in A.S.M.'s REVIEW OF METAL LITERATURE. Editor's reply states ASM policy & objectives. —PS

113. Abstracting journals in the electronics field
C. K. Moore ASLIB PROC. 13(3): 65-75 March 1961
Important abstracting & indexing journals in English language on subject of electronics & related fields. —MT

114. Co-ordinate indexing in relationship to medical literature problems.
H. Ginsberg. BULL. MED. LIB. ASSOC. 49: 51-7 Jan. 1961.
Practical discussion, with illustrations from experience at Schering, pro & con. —HO

115. International trends in subject indexing especially in the field of nuclear energy.
Gunther Reichardt. UNESCO BULL. LIB. 15(1):11-17 Jan.-Feb. 1961.
Discussion on international aspects of scientific indexing, complexity of UDC system & adoption by author of "Nuclear Science Abstracts" scheme of subject headings. —DTH

116. A study of indexing procedures in a limited area of the medical sciences.
Judith T. MacMillan and I. D. Welt. AM. DOCUMENT. 12(1): 27-31 Jan. 1961.
Describes combined indexing-abstracting techniques used by Cardiovascular Literature Project. —MEM

117. A unified subject index to science literature.
F. E. Orton. AM. DOCUMENT. 12(1): 32-34 Jan. 1961.
Exploration of possibility of designing an economically feasible tool capable of listing all possible topics of science & technology together with all sources of references to these topics. —MEM

118. Uniterm indexing principles, problems and solutions.
J. C. Costello, Jr. AM. DOCUMENT. 12(1): 20-26 Jan. 1961.
Discusses principles of Uniterm indexing & solution of some problems encountered in applying them to individual document collections. —MEM

BIBLIOGRAPHY

119. The changing philosophy of bibliographic classification.
J. H. Shera. REV. DOCUMENT (The Hague) 27(4):139-140 Nov. 1960.
Plea for librarians to break with traditional methods & apply objective experimental research to bibliographic organization. —RLS

120. One thousand 1960 books for the lower-division college library.
R. C. Jones. COLL. & RES. LIB. 22(2): 101-124 Mar. 1961.
"Science" and "Applied Science" sections are valuable. Publisher, price, Dewey classification no., & L. C. card no. are given. —DBS

121. Winnowings.
W. K. Beatty, BULL. MED. LIB. ASSOC. 49: 102-5 Jan. 1961.
Brief abstracts of good reading to whet your appetite for original. (A continuing feature.) —HO

BOOK TRADE

122. Acquisition of Canadian provincial government documents.
John H. Archer. LIB. RESOURCES & TECH. SERV. 5(1):52-59 Winter 1961.
Publication & sources for Provincial documents are discussed. —MT

123. Reference use of Canadian documents.
Florence B. Murray. LIB. RESOURCES & TECH. SERV. 5(1):48-52 Winter 1961.
Important & useful Federal government documents & publications are available to American librarian. —MT

CATALOGING AND CLASSIFICATION

124. Der Anteil der Schweiz an der Dezimalklassifikation.
E. Mathys. REV. DOCUMENT (The Hague) 27(4):160-162 Nov. 1960.
Review of Swiss interest in decimal classification. —RLS

125. La C.D.U. como medio para hacer sistematicas las listas de epigrafes de los catalogos de asuntos.
J. Lasso de la Vega. REV. DOCUMENT (The Hague) 27(4):169-170 Nov. 1960.
Means of organizing subject heading cross references using special symbols & classification principles of UDC. —RLS

126. La CDU et les sciences sociales.
J. C. Wesseling. REV. DOCUMENT. (The Hague) 27(4):157-159 Nov. 1960.
Criticism of use of UDC for classifying social sciences. —RLS

127. The closed catalog in the fifties.
J. M. Elrod LIB. RESOURCES & TECH. SERV. 5(2): 142-156 Spring 1961
Classed catalog is used extensively outside U. S.; developments are discussed with extensive bibliography. —MT

128. Consistency in Wilson subject headings
Annie May Alston. WILSON LIB. BULL. 35 (3): 250-251 Nov. 1960. A reply: E. B. Colburn, ibid., 35(3) 251, 256 Nov. 1960.
Commentary on "inconsistency in subject headings of two most frequently used periodical indexes for educational topics at college level." Examples are given. Mr. Colburn's reply points out necessity of bearing in mind nature of use & scope of index in question. —PS

129. Cornell's area classification: A space-saving device for less-used books
R. H. Danielson. LIB. RESOURCES & TECH. SERV. 5(2): 139-141 Spring 1961.
Less-used books are housed in a special area, classified by size resulting in compact shelving. —MT

130. Die Deutsche gesamtausgabe der Dezimalklassifikation
C. Walther and K. Fill. REV. DOCUMENT. (The Hague) 27(4):167-168 Nov. 1960.
View of German edition of UDC. —RLS

131. La documentation de l'avocat francais.
R. Dubuc. REV. DOCUMENT. (The Hague) 27(4):171-174 Nov. 1960.
Documentation of French law. —RLS

132. How to roll back the corporate empire.
H. Draper. LIB. RESOURCES & TECH. SERV. 5(1):73-81 Winter 1961.
Personal author entries are preferred, with corporate entry to be considered only as an alternative to a title entry. —MT

133. How will electronic information systems affect cataloging rules?
C. D. Gull. LIB. RESOURCES & TECH. SERV. 5(2): 135-139 Spring 1961.
Machines will handle much of present work faster & more efficiently but will require revisions of cataloging rules. —MT

134. A 'new deal' for universal classification?
G. A. Lloyd. REV. DOCUMENT (The Hague) 27(4):149-153 Nov. 1960.
Suggestions for unified general purpose classification for international use. —RLS

135. New publication methods for the UDC, a proposal.
H. Wellisch. REV. DOCUMENT. (The Hague) 27(4): 145-148 Nov. 1960.
Proposals to assure UDC users prompt revision & publication of useful sections & more adequate indexing of whole classification scheme. —RLS

136. Printed book catalogs.
Marjorie Griffin. REV. DOCUMENT. (The Hague) 28(1):8-17, 1961.
Methods of compiling printed book catalogs with help of punched card machines, with samples from American libraries. —RLS

137. Quandaries and queries in subject control.
M. Ebert. BULL. MED. LIB. ASSOC. 49: 42-50 Jan. 1961.
A rehash with flavor. —HO

138. Reader's impressions of the subject catalog.

L. Darling. BULL. MED. LIB. ASSOC. 49: 58-62 Jan. 1961.

"Most of our agonizings, ponderings & disquisitions on how to organize subject display in catalog for greatest convenience of reader are superfluous." He gets first-hand interpretation from librarian, anyhow . —HO

139. Recommendations for further study in classification.

Phyllis A. Richmond. AM. DOCUMENT. 12(1): 35-37 Jan. 1961.

Suggests several areas for research in field of classification. —MEM

140. Subject organization — can we afford perfection?

S. D. Truelson, Jr. BULL. MED. LIB. ASSOC. 49: 91-3 Jan. 1961.

Author feels that we cannot afford this goal. —HO

141. A suggested classification for the literature of documentation.

Pauline Atherton and Virginia Clark. AM. DOCUMENT. 12(1): 38-48 Jan. 1961.

Classification prepared as class project in Univ. of Chicago, Graduate Library School. —MEM

142. Telescoping of facets and mixed notation.

S. R. Ranganathan. REV. DOCUMENT. (The Hague) 27(4):154-156 Nov. 1960.

Author advocates a more versatile mixed notational system for shortening class numbers. He illustrates this telescoping with references to current practice in UDC and Colon classification. —RLS

143. The development of the U.D.C. from an electro-technical point of view.

E. Moulijn. REC. DOCUMENT. (The Hague) 27(4): 165-166 Nov. 1960.

Problems of UDC with emphasis on those in electrical engineering. —RLS

144. The U.D.C. and the Science Museum Library.

Joyce Lancaster-Jones. REV. DOCUMENT. (The Hague) 27(4):163-164 Nov. 1960.

A history. —RLS

145. Uber die zukunftige Entwicklung der Internationalen Dezimalklassifikation.

Otto Frank. REV. DOCUMENT (The Hague) 27(4):141-144 Nov. 1960.

UDC needs fundamental reforms in structure & application. It must simplify procedures & publication methods if it is to adapt to needs of modern classification & retrieval techniques. —RLS

146. The year's work in review.

Lib. Resources & Tech. Serv. 5(2): 100-134 Spring 1961.

Technical Services in 1960, M. F. Tauber, pp. 100-104; The Year's Work in Acquisitions and Resources, L. D. Bevis, pp. 105-115; 1960: The Year of the Bug (drafting of the new catalog code) P. S. Dunkin, pp. 115-119; Developments in Copying Methods: 1960, A. B. Veaner, pp. 119-134. —MT

COOPERATION BETWEEN LIBRARIES

147. Annual reports of two co-operative schemes.

Sinto and Hults. LIB. ASSN. REC. 63: 11-12 Jan. 1961.

In industrial centers of Sheffield and Hull, Public Library is center of a formal scheme for library co-operation. —SJK

148. Centralized processing centers.

Orcena Mahoney. LIB. RESOURCES & TECH. SERV. 5(1):40-47 Winter 1961.

Discussion of established regional processing centers. —MT

149. Conference on the international exchange of publications in Europe. Budapest, Sept. 13-19, 1960.

Short report on conference outlining achievements & recommendations. Copies of complete final report & working papers of conference are available. —DTH

150. Cooperative program for the development of reference and research library resources in New York State. Interim report to James E. Allen, Commissioner of Education.

Richard W. Lawrence, Jr., Chairman, Commissioner's Committee on Reference and Research Library Resources, Nov. 1960. 28pp.

Committee studied reference & research library needs of students, educators, business, industry, etc. Problems are making material available in sufficient quantities & in proper locations & construction of an effective mechanism for identifying, locating & gaining access to these materials. Statewide & regional cooperative program is proposed which would involve public, but mainly private (business, industry, higher education & private cultural & scientific institutions & associations) libraries. —MB

151. Government effort to coordinate and make available research information.

CHEM. ENG. NEWS 39(18):19 May 1, 1961.

Sen. H. Humphrey recommends expansion of interagency cooperation, with ultimate goal of a government-wide complex of information systems to record all data developed under federal R D projects; present systems "are underplanned, undernourished, & underused." —AMC

152. The library service center of Eastern Ohio; an experience in centralized processing.

Mary L. Eckford. LIB. RESOURCES & TECH. SERV. 5(1): 5-33 Winter 1961.

The Center, established in 1959, orders & catalogs books for approximately 20 small public & school libraries, resulting in economies & improved services. —MT

153. The price of co-operation.

A. H. Holloway. ASLIB PROC. 13(1): 15-25 Jan. 1961.

Many factors contribute to success or failure of co-operation in interlibrary loans, abstracting, index cards, i.e., catalog cards, & translation pools. —MT

154. Regional processing for public libraries.

Evelyn D. Mullen. LIB. RESOURCES & TECH. SERV. 5(1):34-40 Winter 1961.

Review of literature on cooperative & centralized processing. —MT

DOCUMENTARY REPRODUCTION

155. Copy preparation: tailor the originals to suit the process.
R. E. Goode and J. B. Cooper. REPRODUCTION METHODS FOR BUS. & IND. 1(2): 16-17, 54 May-June 1961.
Discusses proper method of preparing & original copy for different methods of reproduction. —MEM

DOCUMENTATION-GENERAL

156. Documentation, indexing and retrieval of scientific information. Addendum.
U. S. Senate. Committee on Government Operations. Washington, D.C., G. P. O., 1961. 22p. $.15. (Document No. 15)
An addendum. cf. DOCUMENTATION DIGEST Item 50, SCI-TECH NEWS 15(1):26 Spring 1961. —RLS

DOCUMENTARY REPRODUCTION

157. Electrostatic photoreproduction at the U. S. Library of Congress.
Donald C. Holmes. UNESCO BULL. LIB. 15(1):18-20, 24 Jan.-Feb. 1961.
Description of use of xerographic reproduction equipment at L. C. in furnishing copies of materials requested & in reprinting catalog cards. —DTH

158. Microcards and microfiches: history and possibilities.
G .H. Davidson. LIB. ASSN. REC. 63: 69-78, March 1961.
Survey of available micro-text forms. Appendices include a "Comparison of reproduction costs" and 2 proposals for standardization. —SJK

159. Miniaturization costs.
E. P. Taubes. REPRODUCTION METHODS FOR BUS. & IND. 1(1): 32-3, 59 Mar.-Apr. 1961.
Analyzes costs of handling 35 mm microfilming of engineering documents in plant vs. retaining an outside service for miniaturization. —MEM

160. NBS revises microcopy test chart.
REPRODUCTION METHODS FOR BUS. & IND. 1(1): 31, 52 Mar.-Apr. 1961.
Describes use of Microcopy Resolution Test Chart issued by National Bureau of Standards. —MEM

161. A new way to get a closer look at Russian research.
Eleanor Stoddard. CHEM. ENG. NEWS 39(11): 86 March 13, 1961.
As public service Chemical Abstracts Service is making available photocopies from its collection of Russian journals, at $1.00 per page, $5.00 minimum per article, payable via coupon. —AMC

162. New methods for presenting bibliographical information in the USSR.
A. V. Kremeneckaia and D. I. Lev, UNESCO BULL. LIB. 15(1): 28-30 Jan.-Feb. 1961.
Conventional microfilm & microcards are used. New method concerns microcard with only a 4 or 5 to 1 re duction ration from original size, or 4 pages per card. Simple magnifiers can be used with tese cards. —DTH

163. Newspapers stay fresh longer in microform; besides, it's cheaper.
V. Tate. PHOTO METHODS FOR INDUSTRY 4(2): 76-7 Feb. 1961.
Discusses use of newspapers on microfilm vs. bound files, also use in newspaper morgues & to preserve information in deteriorating books & periodicals. —MEM

164. NMA conference highlights a new era in reproduction.
H. Ballou. IND PHOT. 10(5): 78-9 May 1961.
Report on 10th annual meeting of National Microfilm Association in Chicago. —MEM

165. One-shot photocopier rushes duplicates
PRODUCT ENG. 32(16):57-59 April 17, 1961.
Design of first completely automatic copying machine built by Ozalid Div., General Aniline & Film Corp., Johnson City, N. Y. Machine turns itself on, makes exposure, peels away negative, trims positive, delivers developed print & turns itself off—all in 23 seconds. —RJH

166. Problems in the production and utilization of microfiche.
Charles Bishop. AM. DOCUMENT. 12 (1):53-55 Jan. 1961.
Describes author's experiences with Gobel's step-and-repeat camera & generalizes on application of microfiche to scientific literature. —MEM

167. Readex microprint publications 1950-1960.
Readex Microprint Corp., New York, n.d. 47 p. On request.
Annotation in Coll. & Res. Lib. 21(6): 497 Nov. 1960. —DBS

168. Short cut in printing organic structures
CHEM. ENG. NEWS 39(13): 60-61 Mar. 27, 1961.
At Chemical Abstracts Service, structural formulas are prepared for printing by assembling very large formulas using hexagons & pentagons, for example, & large movable type, & then photographing at a 12:1 reduction. In a day 150-200 negatives can be produced at cost of 16-22 cents per negative. —AMC

169. Southwestern newspapers on microfilm.
Microflim Service & Sales Co., Dallas, Texas, P. O. box 8066, n. d. 62 p. On request.
Annotation in Coll. & Res. Lib. 21(6): 497 Nov. 1960. —DBS

170. The technical report: there is more than one way to skin a cat.
R. E. Goode and J. B. Cooper. REPRODUCTION METHODS FOR BUS. & IND. 1(1): 12, 14. 62 Mar.-Apri. 1961.
Discusses different methods of producing illustrated technical reports taking into consideration number of copies needed, quality desired, etc. —MEM

171. There's money in microfilms.
Business Week. No. 1651, 144-6, 148-9. Apr. 22, 1961.
Capsule-sized picture of house of Power, University Microfilms, Inc. —AVN

172. United States and Canadian documents on microforms.
P. L. Berry. LIB. RESOURCES & TECH. SERV. 5(1):60-67 Winter 1961.
Advantages of microfilms, titles & sources of available documents are discussed; however, standardization is required for future evelopment of this media. —MT

DOCUMENTATION-GENERAL

173. Academies and research institutes in and near Moscow.
NLL TRANS. BULL. 3(3): 179-218, Mar. 1961.

List of nearly 300 entries. Each entry gives (1) transliterated name of institution, (2) transliterated officiai abbreviation, (3) translated name of institution, (4) address, & (5) telephone number. —DTH

174. The acceleration of science-crisis in our technological civilization.
Derek J. de Solla Price. PROD. ENG. 32(10): 6 Mar. 6, 1961.

This abstract of a chapter of author's book "Science Since Babylon" discusses problem of growth of science vs. availability of manpower. To illustrate growth of science he discusses history & growth of scientific journals, abstract journals & technical papers. —R.J.H.

175. BSDA expands services; Program should give wider access to scientfic reports.
CHEM. ENG. NEWS 39(21):26 May 22, 1961.

O.T.S. is to provide public, at a price, same access to unclassified contract reports which ASTIA provides free to DOD contractors. In July OTS will begin to make available ASTIA's current reports. —ACM

176. The Cole library of zoology and early medicine, University of Reading
NATURE (London) 188 (4757): 1148-1151 Dec. 31. 1960.

Description of many of rare books & incunabula in library of late Prof. F. J. Cole of Department of Zoology of Reading. This library was most exhaustive one of its kind in private hands, now held by Univ. Reading. RJH

177. Documentation in the humanities.
D. J. Foskett. LIB. ASSN. REC. 62: 391-296 Dec. 1960.

Humanities are less well documented than pure science, but there are signs of a growth of consciousness of need for improvement. —SJK

178. The future of scientific documentation
B. K. Blount. NEW SCIENTIST 9(221): 344-45 Feb. 9, 1961.

It is still really necessary for scientists to publish their results in specialist periodicals? Proposals made here envisage publication of separate papers on a national basis, international publication of titles & abstract journals, greater number of journals reviewing progress." —AVN

179. Indexing abstracts coming up.
M. O. Lee. CHEM. ENG. PROGR. 57: 25 Feb. 1961.

Mr. Lee, Pres., Conf. of Biological Editors, suggests interchange of information with the A.I.Ch.E. Subcommittee on Information Retrieval. Editor's comment: An immediate result of Mr. Lee's comments will be publication of A.I.Ch.E. Chemical Engineering Thesaurus which is currently being edited. —AMC

180. The library: the great potential in our society.
V. W. Clapp. WILSON LIB. BULL. 35 (4): 303,306-307 Dec. 1960.

Text of keynote address given by President of Council on Library Resources, Inc., at Second Annual Congress for Librarians, St. John's University, Jamaica, New York, February 22, 1960. Speaker appraises demands society makes on libraries & suggests list of qualities that could accrue to those in profession.—PS

181. Looking to space for more, faster communications.
Business Week, 1643: 82-86, 89-90, 92, 94 Feb. 25, 1961.

Although article is concerned chiefly with broad applications of satellite communications it deals with other possible uses. "This technology multiplies methods of interconnecting human beings with human beings, human beings with machines . . . machines with machines . . . long-distance business . . . will be in form of coded pulse transmissions between business machines." New instruments called Dataphones are already available. —AVN

182. Make the literature your servant.
R. J. Gander. CHEM. ENG. NEWS 39 (5): Pt. 2, 2-5 Jan. 30, 1961.

Survey of types of chemical literature, & function of each. "Important thing is to reserve full, careful treatment for truly significant papers . . . it is primarily in exercise of selectivity that abstracts or reviews can be invaluable." —AMC

183. The metabolism of new scientific information: a preliminary report.
H. Orr. AM. DOCUMENT. 12(1): 15-19 Jan. 1961.

Preliminary report on survey to determine per cent of publication of papers presented at scientific meetings & factors influencing publication. —MEM

184. Pharmaceutical literature: a short guide.
W. R. Bett. BULL. MED. LIB. ASSOC. 49: 63-7 an. 1961.

Reminder of some of more valuable literature proffered by pharmaceutical firms. These are house organs, bibliographies, historical studies, books, & drug reference works. —HO

185. Records of research and discovery, neglected assets of science, I—Some problems and their background.
P. S. Davison. RESARCH XIV (4): 159-163 April 1961.

Forst of two articles aimed at showing importance of records of past scientific effort. Discussed are several methods of information retrieval & how these systems must change to fit present conditions & needs. —RJH

186. Records of research and discovery, neglected assets of science, II—Methods of handling chemical data.
P. S. Davison. RESEARCH XIV (5):207-212 May 1961.

Discussions of machines designed to recognize spectra data by their shapes & allowing use of shapes of curves to index & search large collections. —RJH

DOCUMENTATION RESEARCH

187. Coordination of documentation research and information services by the American Petroleum Institute.
B. H. Weil, E. H. Brenner, Kate Ornsen, et al. AM. DOCUMENT. 12(1): 56-60 Jan. 1961.

Describes program of API's Central Abstracting Service & studies made by API Abstracting Advisory Subcommittee. —MEM

188. Council on library resources.
CHEM. ENG. NEWS 39(4):94 Jan. 23, 1961.

Ford Foundation has granted $8 million to Council on Library Resources for research into improved library methods, specifically ways of storing & finding information; $50 thousand to library of Univ. of Illinois Chicago division to apply advanced data processing techniques to university library procedures; & has made $49,200 contract with Batelle Memorial Institute for investigation of methods to improve reading of microimages. —AMC

189. Thorough analysis of chemical notation systems is the aim of a one-year study.
CHEM. ENG. NEWS 39(16): 39 April 17, 1961.

Study of present & potential use of existing chemical notation systems, & of needs which they do not meet. —AMC

INFORMATION STORAGE AND RETRIEVAL

190. Abstracts of current computer literature.
G. Knight, Jr., ed. IRE. TRANS. ELECTRONIC COMPUTERS EC-10(1): 132-133 Mar. 1961.

Abstracts 1275 through 1282 summarize 8 articles on information retrieval subjects; they include index mechanization, use of symbols, automatic glossary construction. —RJT

191. The ASLIB Cranfield research project on the comparative efficiency of indexing systems.
C. W. Cleverdon. ASLIB PROC. 12(12): 421-431 Dec. 1960.

18,000 documents on aeronautical subjects were indexed by UDC, Facet, alphabetical subject catalog & Uniterm indexing systems. Preliminary retrieval tests have been conducted. —MT

192. British learning machine will simulate brain.
Nick Landon. PROD. ENG. 32(12): 20-21. Mar. 21, 1961.

Description of automatic pattern recognizer (APR) similar in principle to natural circuits to human brain. Unlike Perceptron this computer will process signals in analog form clear through to output indicating stages. —RJH

193. COMAC Mark III designed.
CHEM. ENG. NEWS 39(14):91 April 3, 1961.

Dr. M .Taube described to Chem. Lit. Div. of ACS an improved version of Continuous Multiple Access Comparator. In it basic store of information will be in form of inverted file with item numbers under terms. Items on any segment of a tape under any term can be distributed to item numbers on disk memory. —AMC

194. Cyanamid's organic code uses subdecks.
CHEM. ENG. NEWS 39(14): 90 April 3, 1961.

Dr. L. N. Starker reported to Chem. Lit. Div. of the ACS that 60,000 organic compounds in Cyanamid's file are coded on IBM cards by molecular formula, functional groups, monocyclics & substituents, alkyl & alkylene groups, fused rings & misc. properties, in what is practically direct-punch code. —AMC

195. Dacom makes its bow.
PHOTO METHODS FOR INDUSTRY 4(3): 60-61 Mar. 1961.

Describes new device by Recordak which translates computer code into human language or pictures microfilms it at high speed. —MEM

196. DOD microfilm standards may set pace for industrial application.
A .D. Even. REPRODUCTION METHODS FOR BUS. & IND. 1(1): 16, 18, 20 Mar.-Apr. 1961.

Discusses standardization of Department of Defense engineering drawings on 35 mm microfilm in aperture of punched card & possibility of increasing adoption of system by industry. —MEM

197. Efficiency of indexing systems.
NATURE (London) 189(4762): 359 Feb. 4, 1961.

Review of "Interim Report on the Test Programme of an Investigation Into Campartive Efficiency of Indexing Systems" by Cyril W. Cleverdon. 84 pp. (Cranfield College of Aeronautics, 1960) A surprise was small difference between success of postings for short time of 2 min. as against relatively long time of 16 min. & ability of relatively inexperienced person to index with efficiency equal to that of other more experienced members of staff. —RJH

198. File control with microfilm.
R. F. O'Neill. IND. PHOT. 10(4): 24-5, 68 April 1961.

Describes system for control of correspondence files using combination of microfilm & punched cards. —MEM

199. Finding what we already know — no longer an academic problem.
V. Tate. PHOTO METHODS FOR INDUSTRY 4(5): 28, 30 May 1961.

Discusses use of microphotographic reproduction & machine searching for reducing size of library collections & particularly publication of bibliographic works in this form. —MEM

200. 4 new Random-access memories for digital work.
D. C. Koehler. PRODUCT ENG. 32(18): 51-53 May 1, 1961.

Four new high speed storage systems of medium high capacity are discussed. These are a) barrier grid, b) ferrite sheet, c) flying spot & d) twister. A table is given comparing their characteristics with a magnetic core memory system. —RPH

201. Gaseous maser offers new rival to radio waves.
PROD. ENG. 32(7):18 Feb. 13, 1961.

Bell Telephone Laboratories announces possibility of transmission of large amounts of information by coherent light by means of gaseous masers using helium & neon gas. —RJH

202. Information retrieval.
R. D. Morse. CHEM. ENG. PROGR. 57 (5): 55-58 May 1961.

To faciltate construction by individuals of coordinate indexes, A.I.Ch.E. will (1) include with each paper in their publications a 3x5 form carrying abstract, reference, index terms, etc; & (2) will publish thesaurus of chem. eng. terms. SEE ALSO: Petroleum Refiner 40(5): 263-65 May 1961. —AMC

203. Information Retrieval System Cuts Storage Space, speeds Access.
ELECTRONICS 34(13) 20-21 Mar. 31, 1961.

Brief description of system called "File Search", which

can store coded documents on microfilm. To do a search, the request codes are compared by machine with codes of each document. When a match is made selected material can be viewed, printed on paper, or recorded on microfilm. —DTH

204. The knowledge surplus, and what microfilm may do to resolve it.
V. Tate. PHOTO METHODS FOR INDUSTRY 4(4): 68-9 April 1961.

Discusses various methods of combining microfilm & high-speed searching to attack information access problems. —MEM

205. Machine literature searching — from experiment to experience.
Marjorie R. Hyslop. AM. DOCUMENT. 12(1): 49-52 Jan. 1961.

Describes experience of American Society for Metals Information Searching Service since Jan. 1960.—MEM

206. Mechanical storage and retrieval of organic chemical data.
G. M. Dyson and E. F. Riley. CHEM. ENG. NEWS 39(16): 72-75 April 17, 1961.

Notation systems for organic compounds are algebraic representations of structural formulas, which bypass ambiguities of chemical nomenclature, & facilitate searching for structural units. —AMC

207. Microfilm roundtable.
IND. PHOT. 10(4): 26, 28, 38, 40-1 April 1961.

Answers to questions about making, retrieving & using microfilm by panel of microrecording experts. —MEM

208. New solid-state memory responds to a light beam.
C. J. Lynch. PROD. ENG. 32(7): 16-17 Feb. 13, 1961.

Two scientists at New York University working on ONR contract have developed a solid-state device based on phenomenon of "persistent internal polarization." In addition to promising a cut in "read" & "write" times for computer memories it also has potential in fields of photography & energy storage. —RJH

209. Now: Chemical literature information-retrieval.
CHEM. ENG. 68(2): 84 Jan. 23, 1961.
L. B. Heilprin. AM. DOCUMENT. 12 (1): 6-14 Jan. 1961.

American Socienty for Metals' information-retrieval service is being expanded, as indicated in earlier items. Four types of services are available: bi-weekly search of new documents pertaining to subscribers' problem area; retrospective search covering two years of literature now stored in GE 304's memory; tapes for sale; & generic searches. —AMC

210. On the information problem ahead.
L. B. Heilprin. AM. DOCUMENT. 12 (1): 6-14 Jan. 1961.

Surveys basic problems of information-storing agencies & considers possible solutions. —MEM

211. Patent office man proposes new generic system.
CHEM. ENG. NEWS 39(14)90-91 April 3, 1961.

J. Frome described to Chem. Lit. Div. of ACS the special features of information system developed at Patent Office: placing of codes in groups by signals, which can indicate all compds. in a given mixture. —AMC

212. Selling your management microfilming.
R. C. Coolidge. IND. PHOT. 10(4): 30, 50 April 1961.

Ten common-sense guides to consider when proposing a microfilm system to management.

213. Shutter action translates binary code directly.
PRODUCT ENG. 32(18):56-57 May 1, 1961.

Description of slide-plate digital readout. —RJH

214. A sight for sore ears.
REPRODUCTION METHODS FOR BUS. & IND. 1(2): 40-1, 54 May-June 1961.

Describes Dacom, a machine which translates computer tape into graphs or figures & letters, combines them with a format or billhead, & records them on microfilm. —MEM

215. Specs at their fingertips.
IND. PHOT. 10(4): 22-3 April 1961.

Describes use of Filmsort cards by Navy's Bureau of Ships as means of distributing drawings on unitized microfilm. —MEM

216. Table look-up procedures in language processing. Part 1, The Raw Text.
G. W. King. IBM J. Research Develop. 5(2): 86-92 (Apr. 1961)

Processing languages for information retrieval or automatic translation will always require reference to a dictionary of some sort. This paper is concerned with first loop-up. Method of addressing memories is described which is powerful in processing natural languages. —MCP

217. Towards searching with assured exhaustive retrieval.
Simon M. Newman. REV. DOCUMENT (The Hague) 28(1): 5-7, 1961.

An appeal for greater consideration of significance of document content in design of information retrieval systems. —RLS

218. Two new magnetic tapes developed in West Germany.
PROG. ENG. 32(21): 9 May 22, 1961.

Item concerning magnetic tapes developed by Agfa which can be applied to sheets, disks & cylinders to permit use as computer storage devices. —MEM

219. Two-year cumulative index for ab-abstracts of current computer literature 1959-1960.
G. Knight, Jr.. ed. IRE TRANS. ELECTRONIC COMPUTERS EC-9(4): 547-572 Dec. 1960.

Provides 42 entries under headings: indexes; information retrieval; translation, mechanical. —RJT

220. "You can so find it."
R. P. Berner. IND. PHOT. 10(4):32 April 1961.

Describes four microfilm formats & their requirements for indexing which eliminate retrieval problems.—MEM

LIBRARY ADMINISTRATION

221. Crisis in our university libraries.
R. B. Downs. COLL. & RES. LIB. 22(1): 7-10 Jan. 1961.

Emphasis on need for adequate financial support. Statistics on inflation costs of material & phenomenal growth of publications, especially in science, will interest administrators. —DBS

222. **Director of the national lending library for science and technology: Dr. D. J. Urguhart.**
NATURE 190(4772):215 April 15, 1961.
Announcement of appointment & background of Dr. Urguhart. —RJH

223. **Disappearance of unbound journals.**
M. Brown and F. G. Kilgour. BULL. MED. LIB. ASSOC. 49: 68-71 Jan. 1961.
Yale readers are either more inhibited or more considerate: "unbound issues of moderately used periodicals do not disappear any more often than other materials." Practice of pilfering picks up in June. —HO

224. **Employment of librarians in the United Kingdom.**
NATURE (London) 190(4771):133.
Survey of turnover of library staff showed that 47 per cent of qualified staff leaving were lost to service, only 56 per cent of vacated posts were filled by qualified librarians & 10 per cent remain unfilled. Librarian shortage mostly due to unsatisfactory salary scales. —RJH

225. **A recruitment primer. (A guide.)**
Myrl Ricking. WILSON LIB. BULL. 35(3): 225-239 Nov. 1960.
Practical approach to recruiting procedure that could be followed by individual librarian. Several illustrations, specific suggestions, & bibliography are included. —PS

LIBRARY EDUCATION AND TRAINING

226. **Letter to editor.**
M. E. Gauthier. BULL. MED. LIB. ASSOC. 49: 108-9 Jan. 1961.
Although written from medical standpoint, article has wider applications: training of . . . librarian has not kept pace with rapid advance of . . . (knowledge). Calls for development of program to meet need at both undergraduate & graduate levels. —HO

227. **Science literature in library education; a study of American practice with suggestions for improving the Library Association requirements.**
Alan R. Thomas. LIB. ASSN. REC. 63: 6-10 Jan. 1961.
This study may be compared in part with that by Owens (Spec. Libs. 51:288-293(1960)). —SJK

LIBRARY PLANNING

228. **Birmingham University main library.**
K. W. Humphreys. LIB. ASSN. REC. 63: 40-41 Jan. 1961.
After long period of library fragmentation University of Birmingham now has new main library with number of interesting features. —SJK

229. **Building, shelving, and storage.**
W. H. Jesse. COLL. & RES. LIB. 22(2): 165-167 Mar. 1961.
Review on "State of the library art," vol. 3, comprising three parts: BUILDING, by R. E. Ellsworth; SHELVING, by L. Kaplan, & STORAGE WAREHOUSES, by J. Orne. —DBS

230. **Cortland's teaching materials center.**
C. T. Cox. WILSON LIB. BULL. 35(3): 240-242 Nov. 1960.
Describes set-up and organization of collection of curriculum & teaching materials for teachers college. Illustrates use of library procedures in headling collection. —PS

231. **Harwell Atomic Energy Research Establishment library.**
L. J. Anthony and M. Gosset. LIB. ASSN. REC. 63:42-44 Jan. 1961.
As at many similar establishments library at Harwell has expanded enormously & continuously & now occupies new building designed for purpose. —SJK

232. **Non-public library buildings in the U. K.: a select bibliography, 1950-1960.**
LIB. ASSN. REC. 63:48-49 Jan. 1961. —SJK

233. **Trinity College, Dublin: proposed new library.**
F. J. E. Hurst. LIB. ASSN. REC. 63: 45-48 Jan. 1961.
Main library at Trinity College, Dublin was built in 1732. A competition has now been held for new building. —SJK

234. **The University library, Newcastle upon Tyne.**
William S. Mitchell. LIB. ASSN. REC. 63:35-39 Jan. 1961.
An illustrated account of new library which was opened in 1960 to accommodate 450,000 volumes & 780 readers. —SJK

PROFESSIONAL ASSOCIATES AND SOCIETIES

235. **Centenary of the German Metallurgical Society.**
K. Thomas. METAL PROGR. 79(1): 103-106, 140, 142, 144, 146, 150 Jan. 1961.
Article contains information on history, organization, & progress of Verein Deutscher Eisenhuttenleute from 1860. Portions on metallurgical education, literary activities, & library are particularly worth reading. —PS

236. **Rapport sur les activities de la FID en 1959-60.**
N. A. J. Voorhoeve. REV. DOCUMENT. (The Hague) 28(1):18-31, 1961.
Review, to which are appended reports from member nations & special committees, & a list of FID publications issued after June 1959. —RLS

SPECIAL LIBRARIES AND INFORMATION SERVICES

237. **Books and the American image.**
George V. Allen. ATLANTIC MONTHLY 207(5): 77-80 May 1961.
Informative account of U.S.I.S. libraries by their former director. —AVN

238. **Brains trust on special librarianship.**
ASLIB. PROC. 13(2):41-46 Feb. 1961.
Panel discussed questions on various aspects of special librarianship. —MT

239. **The development of the scientific and technical documentation services in the International Atomic Energy Agency.**
P. I. Nikitin. REV. DOCUMENT. (The Hague) 28(1):3-4, 1961.
Review of publishing activities of agency. —RLS

240. **The distribution of medical literature in Great Britain, and the need for a National Library of Medicine.**
John L. Thornton. LIB. ASSN. REC. 63:79-82 March 1961.

Whilst there are a number of strong medical libraries throughout the country, there is a need for a better system of making literature available to smaller centres. —SJK

241. Making the most of what you've got.
J. G. Hall. ASLIB. PROC. 13(2):38-40 Feb. 1961.

Suggestions for maximum use of limited library resources. —MT

242. A national library of science and invention.
RESEARCH XIV (3):81 March 1961.

Comments on need for new British National Library of Science & Invention. Also given is brief history of Patent Technical Library in Moscow. —RJH

243. The National Reference Library for Science and Technology.
NATURE 189(4769):968-9, March 25, 1961.

A statement of size & some of the problems & future value of new Library. —RJH

244. Reference service: The new dimension in librarianship.
S. Rothstein. COLL. & RES. LIB. 22 (1): 11-18. Jan. 1961.

Discusses scope of services special librarians are called on to perform; increasing dependence of research workers upon librarians is cited. —DBS

245. The Scientific and Technical Documentation Center of the Philippines.
Walter T. Lorch. UNESCO BULL. LIB. 15(1):25-7 Jan.-Feb. 1961.

Functions & collections of center are described. Abstracting & translating unit prepares "Philippine abstracts" available to other libraries through subscription or exchange. —DTH

246. The Sulfur Institute.
CHEM. & IND. (London) 1961:30 Jan. 7.

This body is an international non-profit research educational organization, principal purpose of which is to promote & expand use of sulfur in all its forms throughout the world. A major immediate project is to develop a center for sci-tech. information dealing with sulfur & its uses. —HO

247. UEC will house world's outstanding Engineering Library.
J. H. Cansdale. ASHRAE JOURNAL 3 (5):90-91 May 1961.

Description of collection, staff, services, growth & future outlook of Engineering Societies Library which will be housed at new United Engineering Center in New York. —RJH

TECHNICAL WRITING AND EDITING

248. The art of writing.
CHEM. & IND. (London) 1961: 166-8, Feb. 11.

Reprint of trenchant comment regarding learning an art from an able practitioner of it. "If after 2-3 years (of practice) you cannot distinguish between good writing & bad, take up backgammon or golf." "In writing for a scientific journal a description of new experiments or new explanations, accuracy & brevity are probably more important than ease of writing or reading." Art of writing cannot be reduced to a set of precepts. —HO

249. Choice and chance in scientific communication.
L. P. Hammett. CHEM. ENG. NEWS 39(15):94-7 April 10, 1961.

To meet present crisis in scientific communication, Dr. Hammett recommends, among other things, a page charge for primary publications; informative titling; distinction between ideas & facts, with only former included in some other way. —AMC

250. How to start to write a report.
J. P. Laird. PROD. ENG. 32(4):46-47 Jan. 23, 1961.

Author feels that correct attitude of writer is more important than mechanics in writing a technical report. Four guideposts for forming correct frames of mind are given. —RJH

251. Proposed system of periodic reports to government agencies.
C. Susskind. IRE TRANS. ENG. WRITING & SPEECH EWS-4(1): 19-20 Jan. 1961.

New scheme is proposed for simplifying preparation, submission & distribution of quarterly & other periodic reports required under most technical & scientific government contracts. Each organization would submit a single report each quarter covering work under all contracts in a given field, with suitable acknowledgements of support of each sponsor. —RJT

252. Publishing the weekly technical news bulletin.
William H. Puder. STWP REVIEW 8 (2):24-7 Apr. 1961.

Format, sources, indexing system, purpose & results obtained by publication of Sandia Corp.'s TECHNICAL NOTES are described. —MB

253. Science and industry — The problem of communication.
Chemistry and Industry 19: 635 May 13, 1961.

Report on meeting held in Swansea April 18-19. Creation of an adequate awareness of position of science in our present-day lives was underlined. "Is it too much to ask of our educational system in the 20th century that the fundamental principles of scientific thought, and some skill in the use of them should form part of the training of every educated man and woman . . .?" —HO

TRANSLATION

254. Advances in machine translation.
Sydney M. Lamb. NEW SCIENTIST 9(220): 260-61 Feb. 2, 1961.

"Large-scale computers are capable of translating a language; but to do so they must be furnished with a systematically organized body of linguistic information . . . Eventually translation at 6,000 words a minute will be possible." —AVN

255. Air Force machine will start translating Russian this Fall.
PRODUCT ENG. 32(21):15-16, 20 May 22, 1961.

Description of 3 part translating unit at IBM's new research lab in Yorktown Heights, N. Y. Machine will translate Russian technical literature at rate of 100 words per minute. —RJH

256. Language translation needs of the U. S. will increase at least three times.
CHEM. ENG. NEWS 39(5): Part 1, 41 Jan. 30, 1961.

Planning Research Corp., Los Angeles, finds in a study made for IBM that language translation needs of the U.S. will increase three to ten times by 1970, to a quantity of one to four billion wards a year.—AMC

USE OF INFORMATION

257. Scientific information and its users.

J. D. Bernal. ASLIB PROC. 12(12):432-438 Dec. 1960.

Available information is only as valuable as communication system existing between information officer & the user. —MT

258. How can our patent system be improved?

S. R. Frankel. PRODUCT ENG. 32(19): 20-21 May 8, 1961.

Suggestion of a new "5-patent Rule" allowing inventors with over 5 patents to obtain royalties on new inventions which contribute a new branch of business for his parent organization. —RJH

259. Views on reading habits open to question.

CHEM. ENG. NEWS 39(9): 68-9 Feb. 27, 1961.

Results of Case Institute study not entirely in line with some earlier concepts of how scientists go about their reading. —MM

Washington

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ALLAN MARKOFF, Director

THE MAIL BAG

Dear Frank:

I am sending you enclosed as discussed, the short notice on ASTIA for the Summer issue of Sci-Tech News. Please note my reference to the ASTIA Coordinating Committee Report in the Winter issue, 1960, pp 124. In order to give you a more detailed idea of what the Committee did since the mentioned report and a very condensed summary of the Committee's activities, I am also enclosing my letter to Dr. Herbert York of May 2nd, 1960. In going over the report and the letter, you will find the greater part of your complaints about ASTIA listed in one form or another.

I happen to know what your gripes with ASTIA are since I received a copy of the correspondence yesterday from Mr. Stearns. In fact, in our original "shopping list", we wanted to include also personal author index and a correlation index between AD numbers and document numbers of the originating agencies. The reason for not including these points in our agenda was merely that according to the general feeling of the Committee, enough suggestions, most of them of greater importance, had been listed and we felt that adding more at that point would have made the list over-extended and cumbersome.

However, we feel — and this seems to be the opinion of ASTIA too — that the time would now be appropriate to take up the matter of an index for personal authors and a correlation index between AD numbers and originating agency numbers.

As to your definitely justified complaint about the cumulative index, it may interest you to learn that I had raised the same question last Fall when attending an ASTIA Committee arranged for military librarians in Washington, to which I and the Commitee members had been invited. I took up this question again during the San Francisco Conference in my discussions with Mr. Stearns and Mr. Heald, since I consider it of cardinal importance for the user to be supplied with what you call "sub-descriptors". It was the Committee's opinion that pages and pages listing Guided Missiles, for instance, serves no practical purpose. What is particularly needed are entries for nomenclatures such as names of missiles, airplanes, projects, equipment, etc. Until that is done, the index is no doubt of very limited value. I have been trying to stress this time and time again when discussing our problems with ASTIA, and I have the feeling that a change in this respect is going to be worked out.

If you or any of our colleagues on the West Coast have new ideas, please do not hesitate to let me know about them. Best regards.

Sincerely yours,
Michel O. Friedlander, Chairman
ASTIA Coordinating Committee

Dear Frank:

I just got the February 1961 SLA Recruitment Newsletter in which Marguerite Moran quotes your note in SCI-TECH NEWS. She is repeating an error which occurred in your report of my talk. Since I realize that my estimate could be off by 100% I did not originally feel it worth writing you when I saw your note in SCI-TECH NEWS but perhaps to avoid confusion I should make it clear that my estimate was that a total of 30,000 special librarians and information specialists would be needed. I also guessed that there are about 15,000 now so that during the next ten years we should be adding about 1,500 a year, or about the number of library school graduates at current rates. I don't think these figures are as important as is the realization that we are going to need many more special librarians than we are at present producing and I feel that your points are very well taken.

Sincerely,
Winifred Sewell, President

Dear Frank:

At the Sci-Tech business meeting, it was suggested that some mention be made in **Sci-Tech News** of the person to whom comments on our Division and Section Structure Study should be addressed. It was decided that such comments should be sent to **Sci-Tech News** and to the Committee Chairman, Mrs. Bertha Allen, Organization 3421, Sandia Corporation, Sandia Base, Albuquerque, New Mexico.

By sending comments to both places, you can choose some to print, Bea (Bertha) can reply to those requiring replies, and the whole discussion process might be considerably expedited — we hope!

(Mrs.) Lois E. Godfrey
156 Tunyo
Los Alamos, New Mexico

Dear Frank:

Since the advent of the Documentation Digest under the auspices of the Chemistry Section I have had a dream—namely, that we could expand this publication into a periodical under the SLA banner. It's a large order, but perhaps we should consider it. To be sure, American Documentation is doing much the same thing in its quarterly, but this need not deter us. Maybe it's pride of personal effort, maybe it's pride of association, but I think our digest is the better of the two.

I'm not looking for a job, either. My time is full enough. Rather, I am looking to a future publication which is vital and could be a real service to the many librarians, information specialists and documentalists who are concerned with such literature.

There is perhaps a profitable field for exploration in the possibility of a joint effort on the part of ADI and SLA. May I submit the idea as a starting place for discussion?

Alice V. Neil, G. E. Res. Lab., Schnectady, N. Y.

Dear Frank:

We at the Los Alamos Scientific Laboratory have been trying to obtain a copy of an article by V. I. Mikheeva on the constitutional diagram of Ce-Mg-Mn published in Moscow, Aviatsionnyi Tekhnologicheskii Institut TRUDY, v. 7, p. 62, 1949.

If any of your readers has this volume of TRUDY or knows where we can borrow it, we would be very pleased to receive the information.

Barbara Hendry, P. O. Box 1663, Los Alamos, N. M.

Dear Frank:

The National Academy of Sciences—National Research Council has just published a **Directory of Continuing Numerical Data Projects: A Survey and Analysis by the Office of Critical Tables (Publication 837).**

This 66-page booklet gives the following information about more than 30 groups that compile scientific numerical data on a continuing basis: organization of the project; substances and properties covered; sources and evaluation of data; use of nomenclature, symbols, units and physical constants; currency; format; and publication and distribution. Projects have been grouped according to their coverage into the following categories: physicochemical, crystallographic and mineralogical, nuclear physics, thermophysical, specroscopic and compherensive.

The Directory may be purchased for $1.00 from the Printing and Publishing Office, National Academy of Sciences—National Research Council, 2101 Constitution Avenue, N. W., Washington 25, D. C. Quantity discount rates are available.

Guy Waddington, Director

NOTICES

Lois Brock, Chairman of Sci-Tech Publications Committee at the time Division Union was abandoned.

It is only fair for participants in the fourth edition of UNION LIST OF TECHNICAL PERIODICALS to know what became of the cards they submitted. Members of Sci-Tech who answered one or more questionnaires should also be informed.

The card collection was housed in the Kresge Hooker Library at Wayne State University where a working committee undertook the king-size project of verifying and consilidating entries. At one time the Science-Technology Division voted funds for clerical help to speed the project. However, the editoial work had not proceeded far enough. Meanwhile, some participants mentioned that their holdings were no longer accurately reflected in the cards they had sent. Moreover, the Union List Project got under way at the Library of Congress.

For a time we thought our fourth edition could come out logically during early discussions of the joint venture. We planned to cooperate fully with subsequent efforts along these lines, especially since our own parent Association had expressed an interest.

When Science-Technology abandoned their own UNION LIST OF TECHNICAL PERIODICALS, 4th ed., they looked for a logical resting place for the partially edited cards. Now we can report that the cards and paperwork involved have been sent to

Miss Edna M. Brown, Editor
Union List of Serials, Third Edition
Library of Congress
Washington 25, D. C.

Miss Brown in a letter to Eugene Jackson wrote:

"This is to tell you that in December 1960 we received the cards prepared for the proposed 4th edition of "Union List of Technical Periodicals" prepared by Science-Technology Division of the Special Libraries Association, from Wayne State University. They came too late for us to process for the third edition of the **Union List of Serials.** But we are planning to inter-file all records received for the **ULS** whether used therein or not in what will be a national union catalog of serials. That will then be the resting place for the Michigan cards. When this catalog materializes it will be a wonderful tool. We already answer a good many reference calls and the cards are anything but in good order at this time." Thanks for your good wishes and good efforts in behalf of the **ULS.**"

Several members of the Detroit area have given countless hours in consolidating and editing the cards as far as they could on an extracurricular basis. We hope that much good will come out of all their work through this new arrangement.

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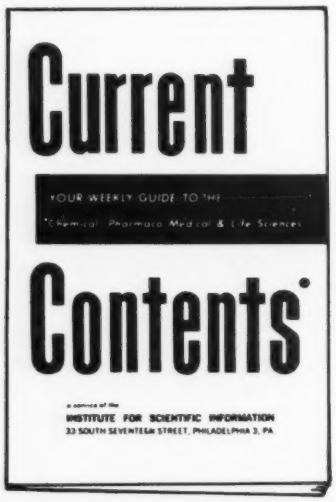

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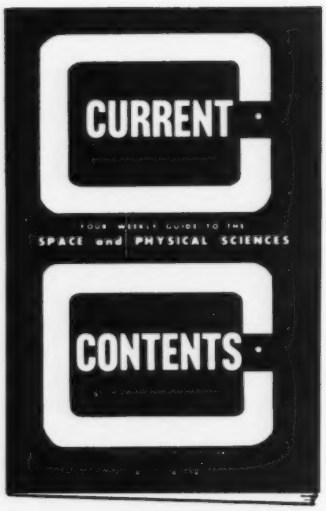

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American Association for the Advancement of Science, Washington 5, D.C.

ASTM BULLETIN
Name change with V. 1, no. 1, January 1961, to MATERIALS RESEARCH AND STANDARDS.

ABSTRACTS OF HUMAN DEVELOPMENTAL BIOLOGY
V. 1, no. 1, January 1961, monthly, $17.00 per volume
Excerpta Medica Foundation, Amsterdam, Netherlands.

ADVANCES IN ANALYTICAL CHEMISTRY AND INSTRUMENTATION
V.1, no.1, 1961, annually, $12.00
Interscience Publishers, Inc. New York

ADVANCES IN COMPUTERS
Vo.1, no.1, June 1960, $10.00 per volume
Academic Press, New York
Brings together articles concerned with the design and operation of computing systems and their components. Will include articles on methods of machine programming and numerical analysis.

AEROSPACE SAFETY
New name for FLYING SAFETY.

AMERICAN ZOOLOGIST
Vo.1, no.1, February 1961, quarterly, $9.00
American Society of Zoologists, Baltimore, Maryland.

APPLIED OPTICS
V.1, no.1, January 1961, bimonthly, $10.00
Optical Society of America, Washington, D.C.
Will contain work in the areas of applied optics and closely related scientific and technical fields e.g. physical, electron, ion, ultraviolet and space optics, lens design and optical formulas, plasma solid state and crystal physics.

ARCHIVE FOR HISTORY OF EXACT SCIENCES
V.1, no.1, October 1960, five numbers per volume, $4.75 per volume
Springer Verlag, Berlin, Germany
Devoted mainly to mathematics and natural philosophy, but also embraces experimentation in the physical sciences.

ARCHIV FUR DIE GESAMTE PSYCHOLOGIE
V.113, no.1, May 1961, irregularly, $21.05 per volume of four numbers.
Deutsche Gesellschaft fur Psychologie
Frankfurt, Germany
V.112, no.4, issued in 1944.

ARCHIVES OF ENVIRONMENTAL HEALTH
V.1, no.1, July 1960, monthly, $8.00
American Medical Association,
Chicago 10, Illinois.

BOTANICAL BULLETIN OF ACADEMIA SINICA
V.1, no.1, June 1960, irregularly, $2.00 per volume.
Institute of Botany, Academia Sinica,
Nankang, Taipei, Taiwan.

BRITISH JOURNAL OF APPLIED PHYSICS
Has discontinued the issuance of supplements. Number 6 (1957) was the last.

CHEMICAL AGE
Will not issue any index after Volume 80 (July-December 1958).

CHESAPEAKE SCIENCE
V.1, no.2, June 1960, irregularly, $2.00
Chesapeake Biological Laboratory, Dept. of Research and Education, Solomons, Maryland

CROP SCIENCE
V.1, no.1, January 1961, bimonthly, $12.00
Crop Science Society of America,
Madison 5. Wisconsin.

DAILY METAL REPORTER
Publication suspended. Subscriptions will be fulfilled with AMERICAN METAL MARKETS.

DOKUMENTATION WASSER (DW)
V.1, no.1, October 1960, monthly, $5.71 per quarter.
Erich Schmidt Verlag. Berlin, Germany.

ELECTRO-TECHNOLOGY
New name for ELECTRICAL MANUFACTURING.

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EXPERIMENTAL MECHANICS
V.1, no.1, January 1961, monthly, $10.00
Society for Experimental Stress Analysis
21 Bridge Square, Westport, Connecticut.

FLYING SAFETY
Name changed to AEROSPACE SAFETY.

GLOBAL TECHNOLOGY
V.1, no.1, April 1961, monthly, $25.00.
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INDUSTRIAL RELATIONS
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INFARED PHYSICS
V.1, no.1, February 1961, quarterly, $20.00.
Pergamon Press, New York
An international research journal for the publication of scientific papers concerning infrared physics and its applications.
It is concerned with the infrared theory, experiment, and instrumentation as applied to infrared detection and transmission and to problems of atmospheric, meteorological, geophysical, and space research.

ISOTOPEN TECHNIK
V.1, no.1, October 1960, quarterly, $2.86.
Deutche Verlag fur Grindstaffindustrie
Berlin, Germany.

JAPANESE PERIODICALS INDEX. NATURAL SCIENCES SECTION
V.1, no.1, September 1960; V.2, no.1, January 1961, monthly, $30.00.
Tuttle (C. E.) Company, Tokyo, Japan.
Part 1, Sciences and technology.
Part 2, Medical sciences.
Approximately eight-hundred (800) periodicals are indexed.

JOURNAL OF THE FORENSIC SCIENCE SOCIETY
V.1., no. 1, September 1960, semiannually, $5.60. Forensic Science Society, Harrogate, Yorkshire, England.

JOURNAL OF THEORETICAL BIOLOGY
V.1, no.1, February 1961, bimonthly, $17.00
Academic Press, New York.

KINETICS AND CATALYSIS
V.1, no.1, April 1961, bimonthly, $150.00
Consultants' Bureau, New York.
A translation from the Russian. Will contain original theoretical and experimental papers on catalysis and kinetics of chemical transformations in gases, solutions, and solid phases.

LOS ALAMOS SCIENTIFIC LABORATORY QUARTERLY REVIEW
V.1, no.1, Winter 1961, quarterly.
Los Alamos Scientific Laboratory,
Los Alamos, New Mexico.

MANAGEMENT INTERNATIONAL
V.1, no.1, March 1961, bimonthly, $11.90
Internationale Zeitschrift fur Betriebswirtschaft und Unternehmensfuhrung,
Wiesbaden, Germany.
Devoted mainly to the nature and solution of management problems of business enterprises, public authorities and other large organizations. Will give particular attention to ideas and progress in management education. Articles will be in English, German, French, and Italian, and also in English if originally in a foreign language.

MATERIALS RESEARCH AND STANDARDS
V.1, no.1, January 1961, monthly, $5.00
American Society for Testing Materials,
Easton, Pennsylvania
Name changed from ASTM BULLETIN

MEDICAL ELECTRONICS NEWS
V.1, no.1, March 1961, monthly, $6.00
Instrument Publishing Co.,
Pittsburgh, Pennsylvania.

METAL FABRICATOR
New name for MANUFACTURING JEWELER.
Will cover a larger field, including all previous metals, metal products, plating department, platers in jewelry and electronics.

NATIONAL RESEARCH COUNCIL OF OF THAILAND. JOURNAL
V.1, no.1, November 1960, quarterly, $5.00
National Research Council,
Bangkok, Thailand.

NONMETALLIC MINERALS PROCESSING
V.1, no.1, October 1960, monthly, $10.00
Ceramic Publications, Inc.,
Cleveland 15, Ohio.

NORTHERN CAVERN AND MINE RESEARCH SOCIETY. TRANSACTIONS
V.1, no.1, 1961, irregularly, $1.40 per issue.
Northern Cavern and Mine Research Society,
Yorkshire, England.
The transactions will treat of the early mining history and industrial archeology of Northern England.

NUCLEONICS WEEK
V.1, no.1, January 1961, weekly, $75.00.
McGraw-Hill Publishing Company, New York.

ORDINANCE LETTER
V.1, no.1, 15 March 1961, weekly, $90.00.
Callahan Publications, Washington, D.C.
Will be devoted to providing authoritative and useful information on contract opportunities also military ordinance installations throughout the United States.

PHYSICS AND CHEMISTRY OF GLASSES
V.1, no.1, February 1960, bimonthly, $18.90
Society of Glass Technology,
Sheffield 10, England.

PURE AND APPLIED CHEMISTRY
V.1, no.1, January 1960, irregularly, $18.00 per volume.
Butterworth, Washington, D.C.

Founded to bring together into one publication all the reports and papers prepared by the International Union of Pure and Applied Chemistry through its Commissions, Sections and Divisions.
Will also contain, when appropriate reports of meetings and symposia held under the aegis of the International Council of Scientific Unions.

REALITIES SCIENTIFIQUES ET TECHNIQUES FRANCAISES
V.1, no.1, October 1960, bimonthly, $2.00. Societe pour la Diffusuen el l'Exportation des Livnes Scientifiques el Techniques Francaise, Paris 6, France.
A bibliographical publication presenting full descriptive and classified listings of French books on science and technology. The magazine contains in French, English, and Spanish articles about French technical achievements.

REVIEW OF POPULAR ASTRONOMY
Name changed from MONTHLY EVENING SKY MAP.

SCIENCE REVIEW
V. 1, no.5, October 1960, monthly, gratis. National Institute of Science and Technology and Philippine Atomic Energy Commission, Manilla.

SOVIET PHYSICS — DOKLADY
Journal changes from bimonthly to monthly starting in July.

SOCIETY OF PETROLEUM ENGINEERS OF AIME. JOURNAL
V.1, no.1, March 1961, quartely, $15.00 per annum; $5.00 to public libraries. Society of Petroleum Engineers of AIME Dallas 6, Texas.

SOCIETY OF PLASTICS ENGINEERS. JOURNAL
Now SPE JOURNAL. Do not confuse with S.P.E. JOURNAL published by Society of Petroleum Engineers.

SOVIET SCIENCE IN TRANSLATION
Publication suspended with Volume 4, no.12, February 1961.

SPACE WORLD
Beginning with the August 1961 issue, will be published monthly instead of bimonthly.

ZEITSCHRIFT FUR CHEMIE
V.1, no.1, October 1960, monthly, $2.14. Deutche Verlag fur Grundstoffindustrie, Berlin, Germany.

SCIENCE-TECHNOLOGY DIVISION
BALANCE SHEET
JULY 1, 1960—MAY 31, 1961

	Income	Expense
Division Allotment	$1,577.01	
Sci-Tech News		$1,594.45
Subscriptions	119.99	
Advertising	1,169.37	
World List . . .		
Aeronautics & Astronautics	378.39	105.00
Chemistry Section		116.77
Engineering Section		75.35
Petroleum Section		24.08
Public Utilities Section		9.28
Division Supplies		15.67
Postage		8.24
SLA Headquarters		145.02
Contingencies		85.25
	$3,244.76	$2,179 09

NEW CATALOG CARDS

From one typed master a number of copies are reproduced on catalog cards to supply the catalogs of four company libraries at separate locations. By-products of our system are a library acquisitions list and extra cards which may be sent to interested individuals at any company location.

The Cataloger prepares one typed master for each item cataloged. In addition to the descriptive information, the call number and the library location symbol, and all subject headings are typed on the master. Precut offset masters, 3" x 5" in size, are used. The number of cards to be reproduced from any one master is marked in pencil at the top of the mat.

The typed mats are then sent to the Duplication Section, as scheduled, to be printed on a medium-size offset press.

Copies are printed on 100 per cent rag content, hole-punched, 3" x 5" card stock. After printing, the cards are returned to the cataloger. No further typing is necessary since all selected subject headings appear at the top of each printed card. The cataloger sorts the cards and indicates the filing point for each card in the card catalog. This is accomplished by stamping a small red arrow-head to the left of the file heading. The stamp is a small self-inking hand stamp. Finished cards are then distributed to be filed in the card catalogs. Any remaining cards are set aside to be used for make-up in the preparation of an acquisition list, or are sent to individuals who have expressed an interest in a specific subject.

The offset method replaces the "Cardmaster" method used previously. The same style catalog card had been manually reproduced by means of the "Cardmaster" printer using mimeograph stencils of post card size.

In the "Cardmaster" method the prepared stencil is attached to the printer along two edges so as to cover an inked pad. A handle allows assembly to be rolled with even pressure over a 3" x 5" blank catalog card. The cards must be aligned on the base one at a time. Care must be used to obtain an image with even density. The method permits any number of copies to be produced from one master at little cost. A complete "Cardmaster' 'outfit, with all supplies ready to use, can be obtained for about $30.00 from the Cardmaster Co., 1920 Sunnyside Ave., Chicago 40, Illinois.

Good reproductions by any copying method begin with good originals. This quality is built in at the source when proper attention is given to high quality typing: clean typewriter, proper ribbon and sharp impressions.

*Reprinted from New Jersey Chapter Bulletin, Feb. '61.

THE POET'S CORNER

Due to the tremendous reception of Gnegie McClain's poetry (Spring '61)—well, there were actually three people who razzed me about it at the Convention, I have decided to include some more by the same author. Since misery loves company, Gnegie would like to invite any of you to join in this column with some of your miserable poetry. Surely there are some of you, having been misguided to Literature as a prerequisite for Library Science, might actually have liked the stuff well enough to try your own hand at (ugh) immortality.

(Editor's Note)

YOUR HANDS, a lyric

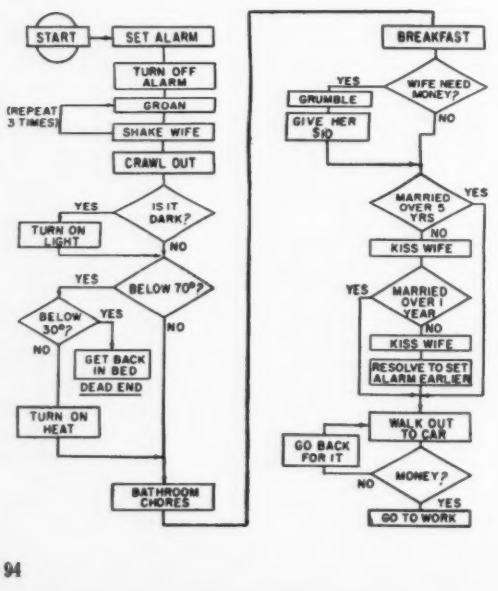
Like the leaves upon the limb
Like the wind across my cheek
Like a melody of love —
Are your hands to me.
As the dusk creeps into night
As a wine creates a glow
As desire turns into love —
Are your hands to me.
    Remember our meeting that day,
    You blushed as I came your way,
    But when we touched our hands I knew
    That I could only be happy with you!
Like the softness in your eyes
Like the sweetness of your smile
Like your tenderness in love —
Are your hands to me.

TO SONNETEERS

Sonnets are made by fools
Who, with a few rhymes under their
Bonnets, proclaim to the world that
You will accept them as poets.
When in truth (really not the
Truth, but just an expression of
Men) the opposite is closer — a sore
Tooth they are — to be removed.
They twist the words, they twist the
Thought, until you shout a loud
"Hey, how could man hath
Wrought such a godawful mess?"
Fools are they and I am too —
Rules are not my plate of stew.

How to Get to Work in the Morning

Is getting to work in the morning your problem? It has been for centuries and men are still searching for a solution. Now it appears that the search is over. The editor (with thanks to the Esso Oil Company, the originator) is reprinting a flow chart for solving the daily problem of how to get to work in the morning.



INFORMATION SCIENTIST

Our organization is actively engaged in the development of new methods for the dissemination and retrieval of scientific information. We offer an exceptional opportunity for a qualified man or woman on our CITATION INDEX PROJECT — a new approach to bibliographic control of scientific literature (See Science 122: 108-11, 1955). This full-time position carries the responsibility of supervising a staff of clerical and data processing personnel. The individual we are seeking may be a librarian or a scientist. He should have major experience in one or more of these areas: reference, cataloging, indexing, data processing. Send your complete resume including salary requirements to: Institute for Scientific Information, Dept. STN, 33 So. 17th St., Phila. 3, Pa.

REPORTS

52nd Annual Convention

Science-Technology Division

Annual Business Meeting

May 31, 1961

I. ACCEPTANCE OF MINUTES OF LAST ANNUAL BUSINESS MEETING AS PUBLISHED IN SCI-TECH NEWS

Meeting was called to order at 4:30 p. m. by Herbert S. White, Chairman. He announced that all reports will be published in **Sci-Tech News,** but that only reports including recommendations or points of business requiring action will be heard at this meeting.

The Minutes of the last Annual Business Meeting as printed in **Sci-Tech News** were approved.

II. REPORTS

The Treasurer, John Binnington, reported a July 1, 1960, balance of $1,713.89. Income was $3,244.76 and expenses $2,179.09. Cash balance May 15, 1961, is $2,-779.56. Report was approved as presented.

Membership Chairman, Carl Losse, reported as of May 22, 1961, membership totaled 2,284. Previous totals were: for 1960 2,180 and for 1959 2,034. Largest section was the Chemistry Section, with 1,304. Report was approved as presented.

Gertrude Bloomer, Editor, reported on **Scientific Meetings.** There will be one or more issue this year in October. It is still cooperative effort. May 11th there were 536 subscribers, and the cash balance is $2,203.61. The report was approved as presented.

Chairman White reported that the Science-Technology Advisory Committee voted in February in Kansas City to offer that **Scientific Meetings** be published by The Association after 1961 as an enlarged publication probably supported by a foundation. The Executive Board referred the matter to the Publication Committee, which will report in September.

The Chairman reported for Frank Bennett that **Sci-Tech News** is well on its way to being a self-supporting publication. Mr. George Halpern is the newly appointed Business Manager.

Margaret Anderson reported that the afternoon's panel discussion was taped, both for **Sci-Tech** use and for radio broadcast by KPFA, a local, subscribed-supported station.

Comment made by Herbert White was that this Convention has seen the most professional programs within the Divisions and Sections that he has recalled.

III. COMMITTEE REPORTS

The Chairman read from the report of the Project Development and Evaluation Committee for Betty Bateman. This Committee will be merged with the Sections and Group Projects and Coordination Committee. The list of technical bibliographies held by various libraries was recommended as a project. It was announced that the Engineering Section has accepted, through incoming chairman George Mandel, the suggestion to publish a Guide to the Published Series of College and University Engineering Research Departments.

Lois Brock reported that the new Procedures Manual is completed, and that 75 copies were made. All manuals will be assigned, registered with the Secretary, and turned in at completion of term in office.

Andy Glick requested that Sections Chairmen report to him of any new serial titles, so that they can be printed. These may be sent to:

Lockheed Aircraft Corporation
Missiles and Space Division
7701 Woodley Avenue
Van Nuys, California

Dr. Jolan Fertig read the report of the Awards Committee. The Sci-Tech Award of Merit was presented to Mrs. Nell Steckel Steinmetz, Librarian of Pacific Aeronautical Library. The Sci-Tech Publication Awards were presented to both Gertrude Bloomer and Joan Hutchinson, Editor and Business Manager of **Scientific Meetings,** respectively.

Chairman White explained that the report of the Structure of Divisions and Sections Committee will be published in **Sci-Tech News** beginning in the first post-Convention issue. One of the high points is the service to the members given by the Division in the publication **Sci-Tech News.**

The Committee has completed its first charge, to collect information. It will continue working now to develop means for acting on the resulting suggestions and analysis.

Tom Ender suggested that the **Sci-Tech News** printing should include a name and address to direct responses to: Lois Godfrey stated a preference that replies be printed directly in **Sci-Tech News.** Gordon Randall suggested that replies be sent to the Committee Chairman with a carbon copy to **Sci-Tech News.**

Chairman White pointed out that although committees can be formed by Advisory Committee action, they can only be disbanded by annual business meeting vote. He reported the first recommendation is abolishment of the Procedures Committee. Carl H. Losse moved and Scott Kennedy seconded that the functions of the By-Laws Committee and the Procedures Committee be combined. The motion was carried to merge the responsibilities of Sections and Group Project Coordination Committee with that of the Project Development and Evaluation Committee. Carl H. Losse moved and Michael Friedlander seconded that the Advisory Committee's recommendation for the dissolution of the Special Classification Committee be accepted. The motion was carried.

IV. SECTION REPORTS

Fern Heim reported on Chemistry Section projects and its new officers. This is now the largest Section.

Lou Canter reported Engineering Section's new officers and membership and projects progress.

Ann Howard reported Paper and Textiles Section's progress, membership and new officers.

Lee Traven, incoming Chairman, reported for Maryann Duggan the activities of the Petroleum Section.

Katherine C. Owen reported Pharmaceutical Section's contribution of $200.00 to the SLA Scholarship Fund and the refund of Division allotment, due to the continued success of their publication. New officers were announced.

Mildred E. Stone reported that Public Utilities Section had contributed $65.00 to the SLA Scholarship Fund, in memory of Alma C. Mitchell. She reported on other projects and announced new officers.

V. ANNOUNCEMENT OF ELECTIONS RESULTS — ROBERT HAVLIK

Robert Havlik reported elections results, noting a return of 42 per cent. Nine hundred and forty-one (941) ballots were returned, with four ballots invalid because of late postmark and 46 invalid because of no return address. Gordon E. Randall was elected Vice-Chairman and Frances Stratton, Secretary. Both by-laws changes on the ballots were approved.

VI. CHAIRMAN'S REPORT — HERBERT S. WHITE

Herbert S. White presented his annual report, which will be printed in **Sci-Tech News.**

The Chairman turned the meeting over to Margaret Anderson. She introduced Gordon Randall. She announced the followig Committee Chairman appointments:

ASTIA Coordination — Michael Friedlander.
By-Laws and Procedures — Margaret Firth.
Convention — Melvin Day.
Duplicates Exchange — K. Lyon.
Membership — Carl Losse.
Nominations — Doris Banks.
Projects Development and Evaluation — Dan T. Bedsole.
Sci-Tech News Editor — Frank Bennett.
Sci-Tech News Business Manager — George Halpern.
Scientific Meetings Editor — Gertrude Bloomer.
Scientific Meetings Business Manager — Joan Hutchinson.
Structure of Divisions and Sections — Bertha Allen, Sci-Tech Representative to Professional Standards Committee — Barbara Spence.

Under New Business, Charles K. Bauer suggested that future conventions be arranged with a Sci-Tech Day.

The meeting was adjourned at 5:35 p. m.

Respectfully submitted,
DORIS BANKS, Secretary

REPORT OF CHAIRMAN, H. S. White

Writing a short report is never a simple task for me, and trying to summarize as eventful a year as this has been taxes my abilities to the utmost. I will try to avoid repeating the specific items already covered by Committee and Section reports, and stress only what I consider the most important areas.

I approached my year as chairman of the Division with a good deal of humility and apprehension. I knew that, in following Charlie Bauer, I was following in the footsteps of a very dynamic individual, and to an extent my performance would necessarily have to be compared to his. Now, after my term of office, the apprehension is gone. The humility remains.

I believe that the Division has had a strong, if not spectacular year, and I hope I am right in my evaluation that we finish the year in a slightly better position than we started it. If we have progressed, I can take no real credit for the achievement. The Chairman actually does not do any work within the Division — his success is measured by his ability to get other people to work.

We have been very fortunate in that the people who have worked — and I won't deny that more should have worked than did — that those who did work worked well.

Having gone through the experience of planning a Convention program, I feel safe in stating that this has been the most complete and comprehensive program since I have been attending conventions. Not only on the Divisional level, but also in the area of Section participation. The credit for this must go to Margaret Anderson and to the Section program chairmen, who have done what I believe to be an outstanding job.

The financial situation of the Division is sound, and we are in the enviable position of knowing that we can afford a program if it's worth starting. John Binnington has done an excellent job as Treasurer, and you are indeed fortunate in having him for another year. I have never had the slightest doubt in co-signing a check — I was positive that if I didn't know for sure — John did.

I wish I could throw the same bouquets at all of the Section finances, but I can't. Some of our Sections are wealthy, some teeter continually on the edge of the pauper's prison, unable to issue a bulletin and concerned about paying for the ballot mailing. The solution to this problem is as obvious as it is necessary. Section chairmen — you are not going to get rich quick on an allotment of 8 cents per member. If you want money — and you need money to carry on the necessary programs which are not self-sustaining — then you must establish programs to earn money. If you are willing to work you can do this — librarians will almost invariably buy any direct applicable publication in their field of librarianship. If your section is large and you think it is cumbersome, consider this a blessing rather than a bane — look at all the built-in customers you have.

All the officers who have served with me — and who have been subjected to the many panic memoranda I am likely to send out — have performed well. Particular mention should be made of Doris Banks, who, after two years of loyal service as Division Secretary, is retiring from her post.

I will not mention all of the specific reports of the 20 separate committees which operate within the Division — or the 6 Sections, which have committees of their own — or the Chapter Sci-Tech groups. If I single out only a few specific ones for mention — I do not intend to slight the others — but I must be selective or I would be speaking all day.

The Division's publication program is in excellent shape. Frank Bennett has accepted the challenge which Gordon Randall's high standard has given him — and Sci-Tech News has continued the interesting, pertinent, and provocative publication which we have come to expect it to be. Many of the comments in response to Lois Godfrey's survey show clearly how highly you value this publication. Moreover, the intensive campaign to solicit advertising undertaken by Gordon and Frank is beginning to pay off, and there are solid hopes that Sci-Tech News may soon be in the black and self-sustaining. The knowledge that George Halpern, who is one of the real go-getters, has accepted the job of Business Manager, makes me even more confident in this hope.

I look upon the impending transfer of Scientific Meetings to Association status as a gain for the profession rather than a loss for the Division. Gertrude Bloomer and Joan Hutchinson have done a magnificent job in building both the content and the distribution of Scientific Meetings — and in doing this they have worked themselves right out of a job. They have proven that the need for a publication such as this is greater than the ability of the Division to provide on a volun-

teer basis. I believe this is the right direction in which to move — Divisions and Chapters should initiate projects which, if they prove so successful that they outgrow the ability of the originating organization to carry them forward, should be taken over by the Association on a funded basis. Scientific Meetings has meant a great deal to this Division and we will miss it — but we are very proud to see it move up into a larger scope.

The World List of Aeronautical Journals, compiled by Dave Rife and published through the courtesy of Lockheed, has proven a real money-maker for the Division, and has enhanced our prestige. There are other publications — they are published by Sections and Chapter Groups, — and you know how many of them. I need not tell you of their value.

Our new Division Procedures Manual, which has been sorely needed, is now a reality, and we are grateful to Lois Brock for persisting with this task and seeing it through to completion.

The publication of Convention proceedings, which this Division recommended to the Association, is still far from a reality. A feasible study to accomplish this was undertaken, but the Board chose to accept the minority report — this is one area in which we still have some selling to do.

The official status of Divisional groups within the chapters is also still in doubt. Our Sci-Tech groups with the Chapters are very important to us — some of the most worthwhile work of our Division is done on a local or regional basis — and it has been my strong feeling that the bond between Sci-Tech organizations on a local level and the Division must be strengthened, and that these groups must be encouraged and supported. I am sorry that this is one problem I must turn over to Margaret Anderson as unfinished.

You have all received Lois Godfrey's survey on Division and Section structure, and I hope that you completed it with care. We know that our Division, in part because of its very largeness, has considerable problems. Should we be more than one Division? Is the whole Association structure wrong? Are our Sections improperly organized? What are the needs **not** being met? I am sure that there are as many answers as there are individuals in this room at the present time. We knew that before anything else could be done we needed information, and we needed a careful analysis of this information. Lois Godfrey and her committee of Rio Grande Chapter members have worked hard and have worked well — and while we are still a long way from making the Division structure readjustments so many feel are essential — at least we have begun.

Our Division has accomplished much good work during the past year — and there is no denying that it also has problems. But it has no problem which cannot be met and solved by members willing to work. We are all busy with our jobs, with our home lives, with our hobbies — and yet we owe it to the profession we are trying to improve to pitch in and help. I assume we all want to better special librarianship — if we didn't we wouldn't belong to SLA and we wouldn't be here. There is no substitute for work — and there is no substitute for workers. If you are willing and able to work — if you are interested in the work of an existing committee or if you would like to follow up a new idea — speak up! Let the officers know you are interested. We are a large division and it is not possible for the Chairman to know everyone. So, if you are willing to work or if you want to present an idea, let it be known. The satisfactions are well worth the effort.

With this talk I finish my term of office. I have not accomplished all the things I thought I might — and I have done some of the things I was sure wouldn't get done. All the crises have passed — some were averted, some were endured, all were survived. I have enjoyed working for the Division. I have enjoyed being its chairman, and I am grateful to all the people who have advised me and helped me.

Your new team of officers who are ready to take over are all excellent workers who will do a good job. In electing them you have chosen well — but then, with the choices which Charlie Bauer's nominating committee offered you — you could not have helped choosing well.

It is time that you meet your officers for the coming year — and for this pleasant duty, and for the remainder of the meeting, I would like to turn the meeting over to your new chairman for the year 1961-1962, Miss Margaret Anderson.

ANNUAL MEMBERSHIP REPORT
May 22, 1961

As membership chairman of the Sci-Tech Division of SLA, I am pleased to make the following report with observations as follows:

1) Thirty-one mailings have been received from headquarters with new members, re-instatements, changes and drops.

2) The high point of membership was reached at the end of March with a total of 2415. 192 members were dropped on March 31 for non-payment of dues. Some have already been reinstated.

3) The comparison table submitted will show a gain in members, 1961 over 1960 and a substantial growth over 1959.

	1961	1960	1959
Totals	2284	2190	2034
Life	16	19	17
Active	1883	1880	1758
Affiliate	11	6	3
Associate	361	333	245
Honorary			1
Emeritus	13	12	9
No section	225	211	199
Chemistry	1304	1221	1174
Engineering	1265	1214	1153
Paper & Textiles	110	117	105
Petroleum	276	301	294
Pharmaceuticals	279	285	122
Public Utilities	116	116	116

Respectfully submitted,
CARL H. LOSSE
Membership Chairman

SCIENTIFIC MEETINGS
Annual Report of the Editor
May, 1961

SCIENTIFIC MEETINGS has now entered its fifth year of existence. Since its inauguration in 1957 the publication has appeared at the rate of three issues a year.

Sponsored by the Science-Technology Division of Special Libraries Association, SCIENTIFIC MEETINGS is a cooperative project in which certain members of the Division participate by furnishing data regarding meetings which they find announced in certain journals. At the present time, several organizations likewise send announcements of their own meetings from their headquarters to the editor.

Miss Joan Hutchinson is the business manager of SCIENTIFIC MEETINGS. Her activities are the subject of a separate report.

Within the past year considerable thought has been given to the potential direction of SCIENTIFIC MEETINGS. The editor and the business manager believe the publication has proved its value. They have observed, however, that several other lists of meetings are now in publication, many of which duplicate to some extent the data published in SCIENTIFIC MEETINGS, altho the latter title has a distinctive format and presents more complete information. In addition, SCIENTIFIC MEETINGS must depend on volunteers to supply the data to be published. This method of obtaining information results in much unevenness and sometimes serious gaps in the coverage of meetings. The editor and business manager donate many hours of their own and their employers' time to the project.

SCIENTIFIC MEETINGS should now be re-organized and given a recognized place within the framework of the S.L.A. publication program. With the cooperation of Mrs. Marguerite Ritchie, Chairman of the Foundation Committee, the editor and business manager have agreed on certain proposals for the future of the publication. The editor recommends that the proposals presented by Mrs. Ritchie be seriously considered.

Editor, SCIENTIFIC MEETINGS
Gertrude Bloomer

PROJECTS DEVELOPMENT AND EVALUATION COMMITTEE REPORT 1960-1961

This committee agrees with the suggestion that it be merged with the Section and Group Project Coordination Committee. Some of the functions of the two committees are the same and certainly the work of both should be in agreement.

The project proposed by J. M. Bobb for publication of a GUIDE TO THE PUBLISHED SERIES OF COLLEGE AND UNIVERSITY ENGINEERING RESEARCH DEPARTMENTS IN THE UNITED STATES has been considered. his is a worthwhile project and should be sponsored by the Sci-Tech Division. It has been suggested that the chapters in various parts of the country appoint committees to aid in the collection of the information, in checking the op items, etc. Then National Science Foundation be contacted for support financially in publication.

SLA Translation Center under the direction from Alberta Brown is covering the field of technical translations so this project should be pursued no further by this committee.

A directory by subject speciality and location of library is still recommended as a project for Sci-Tech Division to pursue, even though this suggestion was not favorably received by the Advisory Committee.

Also the listing of Bibliography of Technical Bibliographies held by the various libraries is recommended as a project. This could be accomplished through the appointment of a coordinating editor and committees in the various chapters.

The committee cannot report on any work accomplished only on suggestions formulated.

BETTY B. BATEMAN, Chairman
RICHARD C. GREMLING
KENNETH C. KNIGHT
APHRODITE MAMOULIDES

SECTION OFFICERS — 1961-62

CHEMISTRY:
Chairman—Miss Edythe Moore
Vice-Chairman and Chairman-elect—
Mr. Edwin Anderson
Secretary-Treasurer—Miss Marilyn Leasure

ENGINEERING:
Chairman—Mr. George Mandel
Vice-Chairman and Chairman-elect—
Mrs. Helen Redman
Secretary-Treasurer—Miss Joan Hutchison

PAPER AND TEXTILES:
Chairman—Miss Alice Laubach
Vice-Chairman and Chairman-elect—
Miss Janet Hollander
Secretary—Miss Katherine Glass

PETROLEUM:
Chairman—Mr. Lee Traven
Vice-Chairman and Chairman-elect—
Mrs. Carrie W. Eagon
Secretary-Treasurer—Miss Marie E. Koutecky

PHARMACEUTICALS:
Chairman—Miss Wilma Kujawski
Vice-Chairman and Chairman-elect—
Secretary—
Treasurer—

PUBLIC UTILITIES:
Chairman—Miss Mary Conner
Vice-Chairman and Chairman-elect—
Miss Catherine Simms
Secretary—Mrs. Betty H. Solon

SCIENCE-TECHNOLOGY DIVISION TREASURER'S REPORT May 15, 1961

Cash in bank July 1, 1960		$1,713.89
Inc., July 1, 1960—May 15, 1961	$3,244.76	
Exp., July 1, 1960—May 15, 1961	2,179.09	
	$1,065.67	1,065.67
Cash in bank, May 15, 1961		$2,779.56

JOHN BINNINGTON

REPORTS COMMITTEE

My report on the Reports Committee is rather short. I have contacted several members of the Science-Technology Division, outlining to them the scope and aims of the Reports Committee. Their replies were rather less encouraging. It seems to be the general consensus that not much can be done on reports standardization for two major reasons: (1) in only a few cases is the library responsible for the format and issuance of technical documents and, (2) Each company has individual procedure requirements and ideas about the make-up of a report. This enables them to include in the report a certain personality connected with or expressed by the issuing agency.

Not often have I given up on a project which I started, but if I can not find interested Committee members through personal contact at the forthcoming Convention, I shall either recommend the dropping of the Committee, or turn over the chairmanship of the Committee to anyone else if you so desire.

CHARLES K. BAUER.

REPORT OF THE BY-LAWS COMMITTEE
May, 1961

A report was prepared and submitted to the annual business meeting at the June, 1960 convention which read as follows:

To revise the By-Laws of the Sci-Tech Division as follows:

To Paragraph D, Government of the Division, Add Section III, Board of Honor.

1. The Board shall consist of Science-Technology Division members who have served as president of the Special Libraries Association.
2. The members shall be asked to serve in an advisory capacity to the Division upon the call of the Chairman of the Division.

This was passed at the Business Meeting and has been submitted to a mail ballot of the Division when the ballot was sent out in the Spring of 1961. However, the result of this ballot has not at this time been received.

Advice on several aspects of conducting business affairs of the Division has been given.

Respectfully submitted,
MARGARET A. FIRTH, Chairman
By-Laws Committee
Sci-Tech Division

Duplicate Exchange Project Report

Membership: May 1, 1960 —89
May 1, 1961 —80
During the year 18 were added and 27 were dropped (there were 4 resignations).

The program was publicized by several brief articles in Sci-Tech News and also in an article in Special Libraries.

On October 20 and the 21st, 1960, I attended a meeting of the USBE in Washington as a representative for the evchange. Ways and means were discussed for improving cooperation between existing exchanges and the USBE.

Last February our membership was notified that I would like to have some one succeed me for the coming year. Names of several volunteers were submitted to Margaret Anderson, our incoming Division Chairman, who will make the appointment.

I would recommend that the incoming Chairman consider the possibility of amending Rule No. 6 which reads now: "The originators of the listings will fill requests on a 1st come, 1st served basis", to provide for some kind of priority to the requestors who want individual issues of a whole run (at least a year or more of any journal). I do not feel strongely in favor of such an amendement, however, I have had some strong expressions of membership opinion on this topic.

GEORGE E. HALPERN, III
Program Coordinator

PROCEDURES COMMITTEE

Science-Technology Division
May 31, 1961

Seventy-five copies of the revised version of **Handbook of Procedures** have been submitted to the incoming secretary who will assign them to Division officers and other members of Advisory Committee.

In the future, the Secretary will be charged with the duty of making sure that copies of the **Handbook of Procedures** are passed along from one officer to the next and from old committee chairmen to incoming chairmen. When revisions are made, the Secretary will see that copies of the revised pages are sent to current holders of the Handbook.

Changes are to be expected and may be suggested by any member of the Division.

Thanks are due the members of the present Advisory Committee who submitted descriptions of their duties and made suggestions about the preliminary draft.

LOIS BROCK

PROFESSIONAL STANDARDS COMMITTEE
REPORT OF THE SCIENCE-TECHNOLOGY DIVISION REPRESENTATIVE
MAY 15, 1961

Divisional representatives assisted the Professional Standards Committee in formulating standards in several areas of special librarianship.

The Science-Technology Division Representative chose to work in the area of services performed by a special library. Representatives were asked to consult published literature in their chosen field, and to write a set of standards.

This representative submitted a draft copy of "Standards for Services in Special Libraries" (copy attached) to Samuel Sass, Chairman, Professional Standards Committee in April.

BARBARA A. SPENCE

STANDARDS FOR SERVICES IN SPECIAL LIBRARIES

Each special library should publish a written statement defining the purpose, policy and services of the library. This statement should have the approval of the library's supervisory management. It should include sufficient information to acquaint library users with the operation and services of the library.

This statement should list the hours the library is open, resources and services available to users, rules and regulations for library use and any other policies which would effect use of the library.

ORGANIZATION AND CIRCULATION OF LIBRARY MATERIAL:

1. The special library should organize all material in its collection so that it is available for use by the library's clientele.
   a. Books, reports, periodicals, films, recordings and tapes, and material in any other form should be cataloged and/or processed for fast and efficient retrieval. Cataloging and subject classification should be accomplished with user-retrievability rather than librarian-retrievability as its goal. Necessary catalogs and other guides to retrieval of information in the library collection should be established and kept up-to-date.

      The library has a responsibility to instruct its clientele in the use of the library, from card catalogs to abstracting and indexing services. A well organized library collection and an adequately instructed clientele will en-

able library users to locate material directly.

b. Material should be stored for easy accessibility (i. e., in a logical manner and, whenever possible, in one location).

2. The special library should publish clearly defined regulations for circulation of material, and should enforce these regulations.

a. The library regulations should enumerate those types of materials which may be borrowed from the library. They should also list those types of materials which are non-circulating (e. g., reference collection, special collections, etc.) and specify the rules under which these standards materials may be used.

Examples of regulations covering use of non-circulating library material might include:

Reference Collection may be used only in the Library.

Security classified material may be only by properly cleared persons.

3. The special library should establish a fast, effective system for circulating needed material to the requester.

a. The method for charging and recalling library material should be simple, fast and effective.

b. The library staff should anticipate the needs of the clientele and, whenever possible, have material available when it is needed.

c. The special library may offer as one of its services the routing of periodicals or of tables of contents of periodicals.

When material is routed to interested parties, the routing system established should guarantee fast, smooth transferal of material from one person to another. Sufficient records must be maintained to enable the library staff to locate an item at any given time, but should not be so involved as to slow down the routing system.

REFERENCE SERVICES:

The special library should provide adequate reference service to answer the needs of its clientele.

1. The library should have a basic reference collection in its particular subject fields, and in all other legitimate fields of interest to its clientele.

The library reference collection should be adequate to answer not only information questions in the particular subject areas which are that agency's mayor interest, but also questions frequently asked in other fields of knowledge.

2. The special library staff should be thoroughly familiar with the library's resources and should have an adequate knowledge of the resources of other libraries which may be able to provide reference services to the requester.

Through familiarity with the library collection will better enable library staff members to give more complete reference service. A knowledge of the collections of other libraries, particularly neighboring ones, will broaden the reference scope of the library by making available the resources of these other libraries.

3. Each question asked of the library should be considered a legitimate informational need, and should be answered as fully as possible by using the resources of the library and of outside agencies.

The librarian should contact, by telephone, by letter or personal visit, governmental agencies, institutions of learning, industrial organizations and other like agencies to answer the informational needs of the library user whenever necessary.

a. The library should fill requests for specific publications (1) from its collection, (23 by ordering the requested material, and (3) by borrowing the material from sources outside the library. When the requested supplies incorrect or incomplete information the library must verify and complete the information before attempting to obtain the material.

b. The library should be equipped to answer reference questions by searching for information in published resources other than those specifically requested by title.

The library staff should be sufficiently familiar with the collection to enable it to supply quick answers to reference questions or, when requested information is not readily available, to supply parallel or analogous information which would fill an interim need for the requester.

c. Occasionally the library will be able to supply information from the knowledge of staff members, without having to check published sources.

Such knowledge may be considered valid when the information is so frequently requested that the library staff has gained certain knowledge of facts.

4. The special library staff should be adequately trained to provide literature searches and special research services.

a. Staff members should be adequately trained in the use of reference tools, and should have sufficient subject background to enable them to perform literature searches in specialized fields.

The library may be asked to perform a literature search which will cover everything ever published in a specific subject field, or one restricted to a particular period of time, to a certain country, etc. Only when literature searches are done by persons trained in the use of reference tools and with adequate subject knowledge can the library assure its clientele the best possible reference service. Frequently such a literature search will lead the researcher outside of the library to other organizations whose resources supplement those of the special library.

b. The special library should be able to gather and interpret published information for the requester.

When a client registers a need for information, the special library should be prepared, not only to provide published references, but also to evaluate information from published sources and to interpret it to the requester.

c. The special librarian should, when asked, act as consultant to a client who wishes to perform his own literature search.

The librarian can assist the researcher by planning the literature search, by suggesting reference tools to be consulted, by suggesting outside sources of information.

d. The librarian should, whenever necessary, obtain research assistance in addition to that furnished by his staff by (1) making available results of similar research performed elsewhere, and (2) purchasing the assistance of commercial reference or research agencies.

5. The reference service of the special library should include the compilation of bibliographies.
   a. Bibliographies should be prepared by persons trained in bibliographic methods and with an adequate knowledge of the subject matter.
   b. Bibliographies should be compiled according to existing standards. All citations should be checked for accuracy and completeness. Annotations should be included whenever possible. The format of the bibliography should add to its usefulness.
6. The special library should establish a cooperative, reciprocal Interlibrary Loan program with other libraries in order to make available the resources of the cooperating libraries.
   a. The library staff should be familiar with, and practice approved Interlibrary Loan regulations, as published in the American Library Association Interlibrary Loan Code.
   b. The library staff should make certain that the clientele understands and assumes the responsibility for material borrowed through Interlibrary Loan. This responsibility should be published in a clearly defined statement of Interlibrary Loan policy and regulations, and should be enforced.

      Material borrowed from another library through Interlibrary Loan should not be allowed to leave the premises of the borrowing agency, and should be returned promptly on or before the date due.
7. The special library should provide translation service in accordance with the needs of its clientele.
   a. The librarian should be able to determine the existence of translations, and to order them.
   b. When the needed translation does not exist, the library should provide necessary translation service through a member of the library staff or through a commercial translator. The librarian should make certain that all translations are done by translators with sufficient language and subject skill.
8. The special library should provide abstracting services according to its needs. If commercial abstracting and indexing services are inadequate in the particular subject field, the librarian should be prepared to abstract articles from the published literature and make these abstracts available to its clientele.

OTHER SERVICES:

1. The special library should make available to its clientele information on facilities, in-house or commercial, for the reproduction of information in printed, filmed, or other form.

   The librarian should make clearly understood the limitations of reproduction of copyrighted material as specified in copyright law.
2. The library should appraise its clientele of new material received and added to the library collection by publishing an information bulletin.

   The library bulletin may include lists of new acquisitions; new periodical subscriptions; contents of current issues of periodicals; new services offered by the library; meetings, conferences and other events of interest to the library's clientele. By publishing an information bulletin regularly the library enables the users to familiarize themselves with the library's growing resources.
3. The special library should provide sources for personal orders (books, periodicals, etc.), either by ordering them directly for its users or by establishing channels through which each person may order his own material.
4. The special library should, when asked, provide editorial assistance in the preparation of publications issued by the parent organization.
5. The special library should assist its clientele in recreational reading needs by (1) offering readers' advisory service upon request, and (2) making available a collection of general reading books for the use of the clientele. Such a collection may be in the form of a reading list, or may be a separate collection of books either purchased by the library or borrowed from a local public library for use of the special library's clientele.

ASTIA AT THE SAN FRANCISCO CONVENTION

One evening hour at the Sheraton Plaza was scheduled by ASTIA to explain its functions, discuss problems and listen to queries. Yet the well-attended meeting, chaired by the acting head of ASTIA, Mr. John F. Stearns, assisted by J. Heston Heald, Chief of the Document Processing Division, and Messrs. Ferguson and Nielson of the Oakland Regional Offices, lasted well into the night.

Mr. Stearns went far afield to state ASTIA's obligations to its clients, some of the difficulties, its ideas about improving services and so forth. Two innoventions were announced.

First — the white (unclassified part) of the Technical Abstract Bulletin would soon become an appendix to "Government Research Reports," so that AD documents listed there will be for sale at the Office of Technical Services.

Second — DOD will eliminate the "via" for Secret reports in the near future; secret documents will then reach the contractor directly from ASTIA without going first to the cognizant agency.

The larger part of the evening was taken up by questions from the audience. The writer had occasion to note that most of these questions had been the subject of lengthy discussions for over a year and a half between ASTIA and the Coordinating Committee, and had also been brought to the attention of the Director of Research and Engineering at DOD (See report of ASTIA Coordinating Committee Chairman, Sci-Tech News, Winter, 1960, pp 124). Mr. Stearns, as well as the writer, emphasized that cooperation between ASTIA

and the Committee, progress of the Committee's work and at ASTIA would be furthered considerably **if suggestions and questions concerning basic policy procedure and services of ASTIA were channelled through the Committee instead of being sent to ASTIA directly.** This would enable the Committee to clear up misunderstanding, in other instances incorporate new suggestions of which its members were not aware in its ASTIA agenda. It could thus function as a clearing house between ASTIA and the technical librarian, avoiding unnecessary friction and duplication of effort.

The Committee was continued by the Sci-Tech Chairman in its present composition. It will renew its effort to obtain its objectives by keeping in constant touch with ASTIA and carrying its cause ot the new Director of Research and Engineering at DOD, as well as using any other means of accomplishing its aims.

Michael O. Friedlander, Chairman
ASTIA Coordinating Committee

CHEMISTRY SECTION

Report for 1960-61

1. **CONVENTION PLANNING:** As in previous years the main activity of the Chemistry Section for the year has been planning for the Convention Program. This has been the responsibility of our vice-chairman, Miss Edythe Moore. She has planned well for us by joining the Engineering Section for a panel and the Pharmaceutical Section for a luncheon with a speaker. To my knowledge this is the first year our Annual Business Meeting has been planned to follow breakfast.
2. **PROJECTS:** Each year the Chemistry Section makes a plea for project suggestions. Since we have not devised a financially profitable project, we find it difficult to communicate with our entire membership of 1212 on the 8c member allotment from the Division. However, a questionnaire was formulated this year which was enclosed with the ballot. Although the return was not overwhelming, it was gratifying to know that at least 20 percent of our membership cared enough about some of our problems and ideas to return the questionnaire with the ballot.

   For the benefit of those who took the time to read the questionnaire and will know what I'm talking about, I'll give you a few statistics at this time. Some of the ideas will be discussed later.

   1. Format and index of Chemical Publications
      a) Present for discussion at Business Meeting 145.
      b) No problem in our library, 84.
      c) Prefer to write a letter direct to I.E.C., 8.
   2. Chemistry Section Directory
      a) Do you feel such a directory would be useful? yes 173; no 62.
      b) Would a mimeographed bulletin type sufficient? yes 190; no 10.
      c) Would you be willing to contribute some time and gratis duplicating toward this project? yes 60; no 112.
   3. Willing to serve as an officer or on a committee. We now have a list of 77 names.
   4. Of those returning the forms 154 gave Chemistry Section as their 1st choice and 76 indicated Chemistry Section was their second choice.

      Section officers should be from 1st choice listings, yes 148; no 51.
3. **PROGRESS OF CURRENT PROJECTS:**

   Subject Heading List in Chemical Engineering is still in preparation by Miss Mary Francis Pinches of Case Institute of Technology. Due to illness and extra work load, Miss Pinches is not in a position to promise a completion date. We do hope it will be soon as many of you will recall that this project has been in the hopper a good many years. However, Miss Pinches has not been responsible for the project for the entire period. We know that she is working as rapidly as time permits.

   Documentation Digest of Sci-Tech News will continue to be a project of the Chemistry Section. Eighteen persons have been doing the abstracting the last two years under the editorship of Dr. Leslie Poland. He has done a fine job of getting this project on a sound basis, but wished to be relieved of this responsibility for the coming year. We are happy to report that Miss Alice V. Neil, Librarian, Research Laboratory, General Electric Company, Schenectady, New Work has accepted the appointment as editor for the coming year. Miss Neil has been one of the faithful abstractors the past two years.

   Procedure Manual for the use of the Section Officers is practically a reality. Miss Mary Mitchell has sent rough draft copies to the officers for suggestions and comments. We know the manual will be most helpful.

   Recruitment Plans started in June of 1959 are still under consideration. We had hoped to follow up a survey made at an earlier date and work out some plan for recruitment of chemistry librarians through the local chapters. Since the chairman appointed at that time has not functioned the last two years, it seems advisable to appoint a new chairman if we wish to pursue the project.
4. **MEMBERSHIP:** Section membership stood at 1212 on March 31, 1961 as reported by SLA Headquarters. This is an increase of 64 members since March 13, 1960. Letters of welcome were sent out by the Secretary-Treasurer, Miss Ethel Lyon, from June, 1960 to May 15, 1961.
5. **TREASURY:** A balance of is on hand. This will be itemized in the treasurer's report.
6. **ELECTION:** The Nominating Committee, Gilberta Torrey, Chairman, Lillian Hamrick and Meredith Wright presented a fine slate of two candidates for each office to be filled. The new officers of the Section are:

   Miss Edythe Moore — Chairman.
   Mr. Edwin Anderson — Vice-chairman (Chairman-Elect)
   Miss Marilyn Leasure — Secretary-Treasurer.

   May I offer my congratulations and best wishes to the new officers and a challenge to carry the Section forward into more active life next year.

(Mrs.) Fern V. Heim

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by O. I. Babikov

This work is concerned with ultrasonic control methods which are applied in industry, and also with the action of high intensity ultrasonic oscillations on various technological processes. Considerable attention is devoted to ultrasonic pulse methods of flaw detection and physicochemical research.

224 pages **$9.75**

CONSULTANTS BUREAU

227 WEST 17th ST., NEW YORK 11, N. Y.

SCIENCE-TECHNOLOGY DIVISION AND SECTIONS ROSTER (PARTIAL) 1961-62

Division Officers

CHAIRMAN: Margaret R. Anderson, Librarian, The RAND Corporation, 1700 Main Street, Santa Monica, California.

VICE-CHAIRMAN & CHAIRMAN-ELECT: Gordon E. Randall, IBM Research Library, Yorktown Heights, New York.

PAST CHAIRMAN: Herbert S. White, Manager, IBM Engineering Library, Kingston, New York.

SECRETARY: Frances M. Stratton, Lederle Laboratories Division, American Cyanamid Company, Pearl River, New York.

TREASURER: John Binnington, Library, Brookhaven National Laboratory, Upton, L. I., New York.

Committee Chairmen

ASTIA COORDINATION: Michel Friendlander, Grumman Aircarft Engineering Corporation, Bethpage, Long Island, New York.

BY-LAWS & PROCEDURES: Margaret A. Firth, United Shoe Machinery Corporation, Beverly, Massachusetts.

CONVENTION REPRESENTATIVE: (1962) Melvin S. Day, Deputy Director, Office of Technical Information and Educational Programs, National Aeron. and Space Administration, 1520 H Street, N.W., Washington 25, D.C.

DUPLICATE EXCHANGE: Cathryn C. Lyon, Lockheed Electronics Company, Systems Research Center, Bedminster, New Jersey.

MEMBERSHIP: Carl H. Losse, 1820 North 40th Street, Milwaukee, Wisconsin.

NOMINATIONS: Doris Banks, Ground Systems Division, Hughes Aircraft Company, Fullerton, California.

PROJECTS DEVELOPMENT & EVALUATION: Danny T. Bedsole, Main Library, United Aircraft Corporation, East Hartford, Connecticut.

SCIENTIFIC MEETINGS EDITOR: Gertrude Bloomer, The Wm. S. Merrill Company, Division of Richardson-Merrell Inc., Cincinnati 15, Ohio.

SCIENTIFIC MEETINGS BUSINESS MANAGER: Joan Hutchinson, 3317 Cam Vic Terrace, Apt. 9, Cincinnati 11, Ohio.

SCI-TECH NEWS EDITOR: Frank G. Bennett IV, 13513 Cheltenham Drive, Sherman Oaks, California.

SCI-TECH NEWS BUSINESS MANAGER: George E. Halpern, Chief, Libraries, The Martin Company, Baltimore 3, Maryland.

SECTION & DIVISION STRUCTURE: Bertha Allen, Sandia Corporation Library, Sandia Base, Albuerque, New Mexico.

PROFESSIONAL STANDARDS REPRESENTATIVE: Barbara Spence, AVCO Everett Research Laboratory, 2385 Revere Beach Parkway, Everett 49, Massachusetts.

ANNUAL REPORT, 1960-61 PETROLEUM SECTION

I. Past Activities, 1960-61.

A. Membership. As of March 31, 1961, the membership of the Section was 279.

B. Finances. As of May 9, the balance in the Section's account was $657.39.

C. Activities.

1. University of Tulsa **Petroleum Abstracts.** Members of the Section worked with reprerentatives of petroleum companies and the University of Tulsa in developing and planning a weekly Petroleum Abstract Service.
2. "Index of the Sources of U. S. and Canadian Petroleum Statistics." Members of the Section have compiled this publication. It has been submitted to the Publications Office of the National Headquarters of SLA. It is anticipated that this publication will be available for sale by SLA during the latter part of 1961.
3. SLA National Convention Program. Members of the Section planned a technical forum of the activities of abstracting services to be held during the National Convention. Representatives of the leading petroleum abstracting services were invited to participate in this forum. The press releases concerning the forum were mailed to 21 petroleum trade magazines and newspapers.
4. Post Convention Tour to Southern California Petroleum Libraries. The California members of the Section have planned a tour of the libraries of California Research Corporation, Richfield Oil, Shell Oil, and Union Oil Libraries on Friday, June 2, following the National Convention.
5. An official nomination of candidates for Section officers was conducted and the election has been held. The new officers are:

Chairman — Mr. Lee Traven
Vice Chairman and Chairman Elect — Mrs. Carrie W. Eagon
Secretary-Treasurer — Miss Marie E. Koutecky

II. Recommendations.

A. The Petroleum Section must establish common goals and purposes if the Section is to make any achievements. The Section needs a unifying project which will interest members from refining as well as exploration and production segments of the industry.

B. The Section needs to take more active participation in the problems of documenting literature pertinent to petroleum technology. Primarily the Section needs to have an official representative working with the American Petroleum Institute, the Science Foundation, and other groups documenting this information.

C. All present committees in the Section should be dissolved and a fresh start made toward some worthwhile goals.

Maryann Duggan, Chairman
Petroleum Section, 1960-61

REPORT — 1960-1961

Through its various working committees, the activities of the Pharmaceutical Section have progressed satisfactorily during the past year. The total membership of this Section has held steady at 287. The membership chairman sent personal letters of welcome to thirty-three persons. Through this medium, new Section members are encouraged to volunteer for work on one or more committees or projects.

The Pharmaceutical Section is taking part in the Convention exhibit of Special Libraries Association publications by providing samples and information on DRUG INFORMATION SOURCES, UNLISTED DRUGS AND COPNIP LIST.

COPNIP LIST: Suggestions for expanding the coverage of COPNIP LIST material have been proposed by the editor. Subscriptions for 1961 number 199, a growth of 23 over the previous year.

UNLISTED DRUGS has had a good year both financially and editorially. A cumulative index covering volumes 11 and 12 was issued. An editorial manual for UNLISTED DRUGS is in the works. At the request of the U. S. Pharmacopeia, a list of initials used with experimental drug numbers was compiled by the UNLISTED DRUGS editor.

The **Archives** committee has continued collecting, inventorying and checking the material in the Section archives. Problems concerned with maintenance of Section archives will be discussed at the business meeting in San Francisco.

SCIENTIFIC MEETINGS: Through the notice published in the Section's fall mailing, a new contributor to SCIENTIFIC MEETINGS was found within our membership to cover the field of dentistry.

Joint Committee on Pharmaceutical Libraries: Two Pharmaceutical Section members serve on this committee which is composed of representatives from Special Libraries Association, Medical Library Association and the American Association of Colleges of Pharmacy. Publication of the World List of Pharmacy Periodicals now seems assured and plans are in final form to up-date the check list, "Books, Reference Works and Periodical Literature Recommended for College of Pharmacy Libraries" (American J. Pharmaceut. Educ. 19:480, 1955) and it will be ready for publication by next year. The Joint Committee has other new projects in the planning stages, and these will be discussed before our Section at Convention.

Liaison and Bibliographical Services Committee (LABS): Members of this committee have prepared evaluations of five new publications of interest to the pharmaceutical industry. These evaluations were sent to the editors of INDEX CHEMICUS, CHEMICAL TITLES, BIBLIOGRAPHY OF CHEMICAL REVIEWS and CHEMICAL PATENTS. These evaluations will be circulated to the Section membership as a part of the Chairman's fall mailing. The LABS committee continues to hold cooperative sessions with the PMA literature committee. In addition, annual reports of LABS, DRUG INFORMATION SOURCES and last year's Section Chairman's report were sent to members of the FIP Commission on Abstracts as well as to additional foreign contacts. It is hoped that a worthwhile exchange of information to strengthen international ties with pharmaceutical libraries can be fostered in this way.

Treasurer's Report: Because of our numerous successful publication projects, the Section treasurer reports a total income of $16,331.73 and expenditures of $6,234.34 leaving a balance of $10,097.39.

The agenda for the Pharmaceutical Section meeting in San Francisco will include a full discussion of committee reports and action on those items properly coming before the membership.

The Pharmacy Section was represented by Efren Gonzales at the Sci-Tech Advisory meeting held in Kansas City on February 18, 1961.

At its annual business meeting held in San Francisco on May 29, 1961, the Pharmaceutical Section voted a contribution of $200.00 to the SLA Scholarship Fund. It was also voted to refund to the Sci-Tech Division the Pharmaceutical Section's allotment from the Division.

The Section's three publications — **Unlisted Drugs, Copnip** and **Drug Information Sources** — continues to be highly successful ventures from the standpoint of filling real needs and financially, too.

The new officers of the Pharmaceutical Section for 1961-1962 are:

Chairman — Wilma Kujawski

Vive-chaiman and Chairman Elect—Rita Goodmote

Treasurer — Charlotte Mitchell

Secretary — Becky Hawkey

Katherine C. Owens

CHEMISTRY SECTION

As in previous years the main activity of the Chemistry Section for the year has been Convention planning which was ably done by our vice-chairman, Miss Edythe Moore.

PROJECTS BEING CARRIED ON BY THE CHEMISTRY SECTION ARE:

1. **Subject Heading List in Chemical Engineering** under the direction fo Miss Mary Frances Pinches, Case Institute. It is ready to be typed, so is nearing completion.
2. **Documentation Digest of Sci-Tech News** will continue to be a project of the Chemistry Section. Dr. Leslie Poland has resigned as editor and has been replaced by Miss Alive V. Neil, Librarian, Research Laboratory, General Electric Co., Schenectady, N. Y.
3. **Procedure Manual for use of Chemistry Section Officers** is practically completed. The work is being done by Miss Mary Mitchell.

This year a questionnaire was enclosed with our ballot which brought forth considerable comment. As a result the following committees have been appointed:

1. Format and Indexes for Chemical Publications This committee plans to make a study of some of the problems certain periodicals cause librarians and make constructive suggestions to the editor. At the business meeting this morning there was considerable discussion about the perforated pages of I.E.C. and suggestions made for this committee to pass along to the editors. Mrs. Herta Fischer is chairman of the committee.
2. A committee under the direction of Miss Ethel Lyon plans to publish a Chemistry Section Directory.
3. A committee will be appointed to study the proposed projects as presented by the members of the section. A Convention working committee under the direction of Doris Banks, summarized the projects suggestions made on the questionnaires.

Our Nominating Committee composed of Gilberta Torrey, chairman, Lilliam Hamrick, and Meredith Wright presented a slate of 2 candidates for each office. The officers for 1961-62 are:

Miss Edythe Moore J Chairman,
American Potash and Chemical Corporation.
Whittier, California

Mr. Edwin Anderson — Vice-chairman (chairman-elect), NASA, Washington, D. C.

Miss Marilyn Leasure — Secretary-treasurer
Technical Library, E. I. dePont de Nemours & Co., Wilmington, Delaware.

Membership now stands at 1304.

(Mrs.) Fern V. Heim

ENGINEERING SECTION

ANNUAL REPORT — MAY, 1961

Elections:

Officers elected for the coming year are as follows:

George Mandel, Chairman

Mrs. Helen F. Redman, Vice-chairman

Miss Joan M. Hutchinson, Secretary-Treasurer

Membership:

Section membership as of 22 May 1961 totals 1,263 members, which is an increase of 49 members over last year.

By-laws:

The By-laws Committee reported very little progress was made during the year. However, the by-laws are almost in final form and we have high hopes that next year's chairman of this committee will get the by-laws ready for submittal to the membership for approval.

Library Bulletins Project:

The Section has undertaken a new project on Library Bulletins, with Keith Blair as chairman. His committee will select 12 or more of the best engineering library bulletins received in the Blair survey: have about 10 sets bound into volumes that can be loaned to various chapters for reference purposes. Mr. Blair also plans to have a display of outstanding library bulletins at next year's convention. The display will represent the selection made by a bulletin review panel.

The Section held a point meeting with the Chemistry Section which was a panel discussion on the National State of the Technical Translation Program on Monday, 29 May, 1961.

Louis Canter

PUBLIC UTILITY SECTION

The Public Utility Section has a total of 116 members.

The Section contributed $65.00 to the Scholarship Fund in memory of Miss Alma C. Mitchell, a member of the Section for many years.

Our project — Subject Headings List for Public Utility Libraries, is in final draft form and we expect to have copies available during the latter part of 1961 or early 1962.

Two Public Utility News Notes were sent to members during the year.

The Library of the American Gas Association cosponsored a booth at the A.G.A.'s Annual Convention in Atlantic City in October of 1960. The booth stressed —Facts and Figures of the Gas Industry. Copies of the revised edition of "Selected List of Books for a Gas Engineering Library" compiled by Miss Jo Greenwood of Con. Edison of New York, and William Soika of Peoples Light & Coke Co. of Chicago, both members of the P. U. Section, were given out, as well as bibliographies, SLA material, etc.

The Nominating Committee has presented the following slate of officers for the coming year.

Mary Conner, Ohio Power Company—Chairman.

Catherine Sims, Institute of Gas Technology—Vice Chairman and Chairman-Elect

Betty H. Solon, Toledo Edison Co. — Secretary.

Mildred E. Stone, Chairman

SCIENCE-TECHNOLOGY DIVISION PROGRAM

Special Libraries Association Convention, San Francisco

Tuesday, May 30 — 6:00 p. m. — Science-Technology Division Advisory Council Meeting. Dinner, Ritz Old Poodle Dog, 68 Post Street.

9:00 p. m. — Science-Technology Division Open House, Concert Room.

Wednesday — 9:30 a. m.-12:00 noon — Documentation and Science-Technology Divisions program. "Information Retrieval System for Small and Medium Size Libraries."

Moderator: Dr. I. A. Warheit, International Business Machines, Washington, D. C.

Speakers: Dr. G. Jahoda, Mr. Saul Herner, Mr. Paul R. Ackley, Dr. F. R. Whaley.

2:00 p. m.-4:00 p. m. — Science-Technology Division program. "Information and the Scientist."

Moderator: Dr. Sidney Passman, Electronics Department, The RAND Corporation, Washington, D. C.

Speakers: Mr. Irwin Goldman, Senior research analyst, General Telephone and Electronics Laboratories, Menlo Park, California.

Mr. William L. Wolfe, Supervisor of IRIA (Infrared Information and Analysis Center) Institute of Science and Technology, University of Michigan.

Mr. Robert J. Howerton, Physicist, Lawrence Radiation Laboratory, University of California, Livermore, California.

Dr. Paul C. Berry, Research Associate, Psychological Research Associates, Arlington, Virginia.

4:15 p. m. — Science-Technology Division Business Meeting.

The annual report of the Vice-Chairman of the Science Technology Division consists principally of the report of the Convention program, a copy of which is attached. Mr. Theodor Yerke, Public Relations Chairman for the Convention, is arranging a taping of the "Information and the Scientist" panel discussion for later broadcasting on KPFA, a listener sponsored station in the Bay area with an excellent cultural reputation. Liaison for the joint Science-Technology and Documentation Division program, also noted on the attached, was carried on mainly with Lorraine Pratt, Documentation Division local representative. No tours were scheduled for the Division because the Sections had scheduled excellent tours.

One of the responsibilities of the office is the liaison work with the Section Program Chairmen and Division and Section Local Representatives in connection with the Convention planning. All Chairmen and Represetatives cooperated wholeheartedly and it was a pleasure to work with them. This work presents an excellent opportunity for the Vice-Chairman to become more widely acquainted with the Division membership.

Herb White is to be commended for his efforts in keeping the Vice-Chairman informed of Division business and activities by supplying copies of correspondence and reports to her. This method is a fine introduction to the responsibilities the Vice-Chairman will be assuming.

MARGARET R. ANDERSON
Vice-Chairman

EXECUTIVE and ADVISORY COMMITTEES
San Francisco, California May 28, 1961

Attending:

Margaret R. Anderson, RAND Corp. (Vice-chairman)

Doris Banks, Hughes Aircarft Co. (Secretary)

Betty B. Bateman, Stanford Research Institute (Project Development & Evaluation Committee)

Charles K. Bauer, Lockheed Aircraft Co. (Past Chairman and Nominations and Reports Committees)

Gertrude Bloomer (Editor, SCIENTIFIC MEETINGS)

Romilda Crow, substituting for Maurene Hughes, Alabama chapter

Margaret A. Firth, United Shoe Machinery Corp. (By-laws Committee)

Michael D. Friedlander (ASTIA Coordinating Committee)

Lois Godfrey, Los Alamos Scientific Lab. (Committee on Division & Section Structure)

R. J. Havlik, Linde Co. (Elections Committee)

Fern Heim (Chemistry Section)

Joan Hutchinson (Business Manager, SCIENTIFIC MEETINGS)

F. L. Kennedy, John Hopkins, Applied Physics Lab (Special Classification Committee)

Carl H. Losse (Membership Committee)

Gordon Randall, IBM Research Center (Publications Committee)

Lee Traven, Secony Mobil Oil Co. (Petroleum Section)

Herbert E. White, IBM Federal Systems Division (Chairman)

The meeting was called to order at 2:10 p.m. by Chairman Herbert E. White, who suggested that some business of annual reports might be transacted in committee to allow a briefer and more interesting annual business meeting. Margaret Firth pointed out that Executive Committee consists of elected officials only; others form an advisory committee. Charles K. Bauer suggested that Section Chairmen should have more time but should not cover every detail of their annual report. He later reversed this opinion to state that since Sections will hear annual reports at Section annual business meetings, the Division business meeting should include more emphasis on committee reports.

Michael Friedlander thought those reports from groups whose chairman is absent could be reproduced and distributed to the members present. Lois Godfrey added that those who attended the Kansas City meeting deplored the long busy reports meeting. Herbert White suggested that reports be restricted to those including a recommendation for action. Margaret Firth suggested that the chairman ask for reports from those committees who wish to report. Gordon Randall pointed out that the Chairman had seen the reports, and asked for his opinion of how many should come to the attention of the business meeting. Chairman White stated these would include Elections Committee, ASTIA Coordination Committee, Structure of Division and Sections Committee and Project Development and Evaluation Committee.

The Chairman asked whether Groups (within Chapters) would be adequately represented by publishing rather than orally reporting. The committee felt they would. Carl H. Losse stated he felt that if Sections have something to report they should have an opportunity. Mr. White assured him they would.

The Chairman moved on to new business, reporting that the transfer of SCIENTIFIC MEETINGS to the Association was proposed at Executive Board. The Board referred the problem to the Publications Committee, requesting a report in September. Burton Adkinson had said the National Science Foundation probably will not be interesting in underwriting. Other comments indicate that volunteer basis will be continued with very little change probable. Gertrude Bloomer explained that since Scientific Meetings is only one of several such publications, and that since its publication is entirely voluntary, some financial support should be sought to maintain its position as the best such list. Charles K. Bauer stated that he felt the publication should remain in the Division, if it will continue as a voluntary publication, rather than be turned over to the Association. He said that an arrangement has been made for WORLD LIST for financial acknowledgement for contributors, which might also be applied to SCIENTIFIC MEETINGS. Gordon Randall pointed out the difficulty in finding volunteers otherwise.

Mr. Bauer asked how the Pharmaceutical Section manages to continue its publication, and Gertrude Bloomer answered that it is and has been completely volunteer. The Chairman asked if we wish to withdraw

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the offer. Margaret Anderson questioned whether we could. Mr. White stated that one of the points in the offer was to broaden and enlarge its scope; the proposed transfer was voted in Kansas City by a show of hands. Michael Friedlander stated that the basic question seems to be whether we can continue the publication as it has been. Charles K. Bauer said that in Kansas City we were told that Miss Bloomer and Miss Hutchinson could not continue. Joan Hutchinson stated that the best source for meetings information needs consideration. Further, the Metals Division is represented in the journal, but they do not contribute to its publication.

Margaret A. Firth said it would be wise to appoint a committee. Gertrude Bloomer recommended a study in committee or similar group to give direction. Gordon Randall asked whether, when the Association's Publication Committee reports, we can either accept or reject. The chairman said we would have an Association opinion or recommendation in September, but that the offer has been made. He added that it is Division responsibility to continue through 1961. However, if the Association rejects our offer, there will be a delay in publication. Carl H. Losse felt it essential that an advisory body be appointed, and Chairman White suggested that Margaret Anderson make the appointments since agreement was general.

Chairman White asked that reports of the Committee on Division and Section Structure be distributed and read, stating that Lois Godfrey will make comments and answer questions. He pointed out that the committee was structured to go out and find information and report. Lois Godfrey said that the committee report was prepared from questionnaire results including some recommendations which avoid conflict with existing and proposed charters. Margaret R. Anderson announce dthat the committee will continue with the same members and Bertha Allen as chairman.

Charles K. Bauer asked what is the next step, and Chairman White said, "to suggest specific means of implementing recommendations and solving the problem". Fenton L. Kennedy said that the suggestion to break into more groups has some disadvantages; the Washington (D.C.) chapter finds a problem in their being too many scheduled meetings. Lois Godfrey stated that the recommendation was not for a great many metings, but rather interest groups organized around common problems without regular planned meetings.

Chairman White stated that at the annual business meeting this report will be set up as one to appear in SCI-TECH NEWS, but that the committee chairman is available for questions and comments which arise from the questionnaire. He said that re: Scientific Meetings he would announce that the offer has been made by the Division to the Association Executive Board, and that they have referred it to the Publications Committee, which will have recommendations by September.

The Chairman asked if there were further problems. Charles K. Bauer said he had two. First he asked whether the Documentation Committee should be encouraged or dropped in their effort toward standardization of title pages of technical reports. The Chairman said he would address a question to the whole floor on who is interested in promoting standardization of title pages of technical reports. Mr. Bauer said his second point was whether the Division would support the publication of WORLD LIST if Lockheed does not subsidize much of its cost. Chairman White answered that we would not treat the hypothetical question but rather handle the problem when it arose.

There being no further business, the meeting was adjourned.

Respectfully submitted,
Doris H. Banks, Secretary

ADVISORY COMMITTEE

Edwin J. Anderson, Washington chapter, v-c
Margaret Anderson, Vice-chairman
Doris Banks, Secretary
Betty B. Bateman, Projects Development and Coordination committee.
Leota Beckwith (for Janet Malcolm)
Heart of America chapter
Danny T. Bledsole, incoming Projects Development and Coordination committee
Frank B. Bennett IV, editor, Sci-Tech News
Gertrude Bloomer, ed, Scientific Meetings
Lois W. Brock, Procedures committee
Mary W. Covington, New York chapter
Romilda F. Crow, Alabama chapter.
Fred Ethridge, Toronto chapter.
Jolan M. Fertig, Awards committee
Michael O. Friedlander, ASTIA
Coordination committee
Lois E. Godfrey, Structure of Division and
Sections committee
George E. Halpern, Duplicate Exchange comm.
Robert J. Havlik, Elections committee
Fern Heim, Chemistry Section
W. Roy Holleman, SLA Director
Ann Howard, Paper and Textiles section
Joan Hutchinson, business manager, Scientific
Meetings
Fenton Kennedy, Special Classifications committee
Beverly Knower (for Olive Whitehead)
Philadelphia chapter
Carl H. Losse, Membership chairman
Ethel V. Lyon, Secretary-Treasurer,
Chemistry section
Florence McKenna (for Marylee Sturgis)
Pittsburgh chapter
Margaret Madden, Greater St Louis chapter
George Mandel, v-c, Engineering section
Edythe Moore, v-c, Chemistry section
Katherine C. Owen, Pharmaceutical section
Gordon Randall, Publications Coordinator
Marguerite Ritchie, Washington chapter
Barbara Spence, Boston chapter, and Div. rep.
SLA Professional Standards committee
Helen J. Waldron, Southern California chapter
Herbert S. White, Chairman

The meeting was called to order at 8:10 p. m. by Chairman White. He introduced a visitor, Mr. Guy E. Marion, member of SLA Hall of Fame and a past president of the association. The Chairman called for reports not appearing on the Agenda, but which include recommendations or a call for actions.

The minutes of the previous meeting were approved with one addition, that Lois Brock and Mary Lee Sturgis were present. The Chairman read the Treasurer's report, pointing out we are receiving profit from SCI-TECH NEWS and WORLD LIST publications. Lois Brock commented that SPECIAL LIBRARIES recently lost one advertiser to SCI-TECH NEWS, and that we should develop an agreement with SPECIAL LIBRARIES editors.

Margaret Anderson reported that this year's program will be taped by KPFA for radio listeners in the Berkeley area. Liaison between Science Technology and Documentation Divisions was achieved through Lorraine Pratt. Further, the Science Technology panel will be taped for possible printing by Permagon Press.

if SPECIAL LIBRARIES releases it.

Michel Friedlander, Chairman of ASTIA Coordination Committee, reported that their recommendations had been presented to ASTIA as well as to Department of Defense representatives, with moderate success. He pointed out the present administration is producing great changes, particularly with the Humphries committee active in Congress.

Dr. Jolan Fertig announced the 1961 Publication Award will be given to Gertrude Bloomer and to Joan Hutchinson for their work on SCIENTIFIC MEETINGS. The Sci-Tech Award of Merit will be presented to Nell Steinmetz, of Pacific Aeronautical Library.

George Halpern reported the Duplicate Exchange has been weeded mercilessly. He has met with members of the U. S. Book Exchange to develop better cooperative exchange.

Robert J. Havlik reported the election results, that the By-laws passed, that Gordon E. Randall was elected Vice-Chairman and that Frances Stratton was elected Secretary. He made the recommendation that the responsibilities of the Secretary and the Election Chairman be more clearly specified, and that the envelop restrictions be eliminated. Carl Losse requested that Headquarters use window envelopes with the address showing through. Mr. Havlik pointed out that elections handling is best kept as simple as possible. George Mandel inquired about double postcards and Chairman White pointed out that there is a limitation for a secret ballot.

Betty Bateman's report on Projects Development and Evaluation was read by Chairman White. The committee agreed with the suggestion that it be merged with the Section and Group Project Coordination committee. It was suggested that Science-Technology Division support the project proposed by J. M. Bobb, to publish a Guide to the Published Serials of Colleges and University Engineering Research Departments, U. S. A. At the suggestion that this is costly to Engineering, and that Sections might sponsor this, George Mandel agreed for the Section. The project on technical translations was deemed unnecessary in view of SLA Translation Center activities. Two directories were recommended for publication, one of subject specialty and location of member libraries, and one listing of bibliography of technical bibliographies.

Lois Brock issued copy No. 1 of the new Procedures Manual to incoming chairman Margaret Anderson. She asked that revisions and recommendations be passed on to the new chairman.

Lois Godfrey pointed out that copies of the questionnaire results will be available at Sci-Tech open house, but they should be read and returned there. Discussion will be encouraged at the annual meeting, and it will be published in SCI-TECH NEWS.

Chairman White pointed out that the By-Laws and Procedures committee functions would be combined, that Special Classifications be discontinued and that Section and Group Project Coordination be abolished but that the Projects Development and Evaluation Committee be continued.

George Mandel inquired whether Sections were expected to report to the Division Projects committee for coordination, and Chairman White agreed that they are.

Lois Godfrey reported that the Rio Grande chapter's work on the Reports Series Dictionary is nearing completion, and will be delivered to Mary Allison in the fall.

Chairman White turned the meeting over to Margaret Anderson for new business. Dr. Fertig brought up the new revision of TECHNICAL LIBRARIES is in draft form. It is becoming a library school textbook in the hands of non-serial publications committee. However, Lucille Jackson Strauss is revising it and working with the committee. Dr. Fertig requested that the Division voice its recommendation that the revision is needed promptly as a Technical Libraries book.

Margaret Anderson announced new commttee chairmen appointments as follows:

ASTIA Coordination — Michel Friedlander
By-laws & Procedures — Margaret Firth
Convention Liaison — Melvin Day
Duplicates Exchange — Cathryn C. Lyon
Membership — Carl Losse
Nominations — Doris Banks
Projects Development & Evaluation — Danny T. Bedsole
SCI-TECH NEWS editor — Frank Bennett
SCI-TECH NEWS business manager — George Halpern
SCIENTIFIC MEETINGS editor — Gertrude Bloomer
SCIENTIFIC MEETINGS business manager—Joan Hutchinson
Structure of Division & Sections — Bertha Allen
Division Representative to SLA Professional Standards Committee — Barbara Spence

Gordon Randall reported that next year's convention has three general sessions planned for Monday, Tuesday and Wednesday mornings. The Executive officers will meet Sunday afternoon. Sci-Tech open house will be Sunday evening. Division's Monday afternoon meeting will be joint. Tuesday afternoon will be available to the Sections. Wednesday evening may be a dinner and business meeting. Thursday will then be free for all-day tours.

The meeting was adjourned at 9:15 p.m.

Respectfully submitted,
Doris Banks, Secretary

Committee on Division and Section Structure
Bea Allen, Helen Redman, and Lois Godfrey, Chairman
DATE: May 15, 1961

I. Appointment and Charge to the Committee

This Committee was appointed by the Division Chairman, Herbert White, in June, 1960. It was charged with investigating the adequacy of the present structure—divisional and sectional—to meet the needs and serve the interests of Sci-Tech members.

II. Background and Survey.

There are five interesting articles which deal with the structure of SLA and its Divisions.* After reading and discussing these, we realized that there were still many questions about the opinions of the members which could only be answered by members of the Sci-Tech Division.

For this reason, we compiled and had distributed our questionnaire of March 31, 1961. Its main purpose was to help us determine the following:

1. How well Sci-Tech Sections function in convention planning.
2. How well the Division functions in convention planning.
3. What percentage of our members attend conventions and are, therefore, concerned with this functioning.
4. Whether the present Division and Section structure seems logical or natural to members.
5. What other ideas members have about SLA and its structure.

We are happy to report that over 680 of the 2300 ques-

tionnaires sent out were returned to us—many with thoughtful comments in addition to answers to our specific questions. We are grateful for the cooperation of such a large number of members despite the rather formidable length of the questionnaire.

Our response came from thirty percent of the members of the Division; forty-one percent of the members voted for Division officers this year.

III. Results of the Survey—Impressions

We have tabulated, studied and discussed the information and opinions sent in to us and have received definite impressions of what the members of Sci-Tech feel they want and need from the Division.

Statistics and Members' comments which substantiate our impressions and on which our recommendations are based are referenced in these sections by (V-I), indicating sction V table I of this report, (VI-A) indicating section VI, Part A, and so forth.

A. General Comments

Throughout our comments and recommendations, the reader may be struck by the emphasis on **size of library**, a factor seldom mentioned in discussions of SLA structure up to now. The size of library designation is really only one of the terms we might have used—terms which are immediately identifiable as related to similarity of libraries. It appears that the Sci-Tech Division in general and the Sections in particular should be striving to bring together members from similar libraries. The most significant aspects of similarity are the content of the library (subject and size) and the size of its professional staff. In reading through the questionnaires we were repeatedly confronted with the terms "small library" and "size of library", (VI-A), which led us to adopt the latter term in our discussions.

B. Conventions

It is our feeling that there is general dissatisfaction with Conventions as now planned and executed (VI-B). Given this fact, and acknowledging that Convention planning is now one function of a Division and a primary function of a Section, we conclude that neither the Division nor the Sections are functioning in such a way as to best serve the needs of the members in this respect.

We have found that more lectures and workshops on professional matters, taking into consideration the type-of-library, type-of-activity and size of library are desired, (VI-B). Most members want meetings that are more practical, more professional, and more geared to the size of library from which the members come.

More time is needed for small, informal meetings (2/3 of members who attend conventions now attend unscheduled, informal meetings. (V-2).

Conflicts of programs scheduled by two or more Sections or Divisions but of interest to the same people are deplored by many members—as are the caliber of the papers ("rehashes" is a favorite derogatory term), the non-professional sessions, and the busy-business meetings, (VI-C). The expense and time involved in travel to distant meetings are also felt to be undesirable.

Approximately one-third of those responding plan to attend conventions annually. Almost one-third more plan to attend every two or three years. The remaining members will attend when the location is convenient, seldom, or never, primarily because they must pay their own expenses. (V-3).

Programming and attndance are problems we must recognize and attempt to solve. We (and many of those who answered the questionnaire) propose regional conferences as a partial solution to these problems. (VI-E). The mechanics will be discussed in Part IV.

C. Division Structure

The structure of the Science-Technology Division is difficult to consider separately from the structure of the other Divsions and of the Association as a whole. There is such a great variation in the size of Divisions (many are smaller than some Sections of Sci-Tech), and such variation is the basis for organization, as shown by the concurrent existence of Documentation, Advertising, Social Science, Military and Museum Divisions, that there is much confusion. The fact that Metals is a Division outside of Sci-Tech is also a factor contributing to the confusion. It appears that the only way to resolve these difficulties would be to look at the whole structure of the Association. Our charge was necessarily not that broad, and our questions were not so directed, therefore, we cannot comment on the structure of the Association except to say that we recommend that it be the subject of a detailed study.

At the present time other Divisions have approximately 200 members who are also members of Sci-Tech. If multiple-Division membership was unlimited (by cost) this number would triple. There are 224 members (of 670 responding) who feel that adequate Division affiliation is now too expensive. (V-5).

From the statistics gathered, (V-6), it is obvious that most members are unable to distinguish between the functions of a Division and those of a Section. Except that members feel the Sci-Tech Division is "too large" or not sufficiently specific in interest to undertake some projects, there is little differentation between these levels in the opinion of most members.

At the present time the Division is concerned with:

1. Convention programs.
2. Publication of Sci-Tech News.
3. Publication of Scientific Meetings.
4. Awards.
5. Project Development and evaluation.
6. Other Projects.
   - Special classifications committee. Code for report preparation.
7. Self-perpetuating functions.
   - Nominations.
   - Elections.
   - By-Laws.
   - Structure study.

If we ignore item 7, assuming that such functions must be carried on, we can examine what the Division is really doing, and what the members think of some of these activities.

Conventions have been discussed.

Sci-Tech News received many favorable comments and recommendations that its scope be increased somewhat to include notes on Section projects and (short) professional papers.

Scientific Meetings is in the process of being turned over to SLA Headquarters and will no longer be a Sci-Tech project.

The Association is encouraging Divisions to increase their activities in the matter of awards. Although we do not know the opinions of the members, since this was not covered in our survey, it seems a reasonable function.

The Project development and evaluation function certainly needs to be carried out at an organizational level which enables the evaluators to have an out-

look broad enough to evaluate realistically all projects which might be related or overlapping in scope. In this connection, there seems to be an organizational gap, not covered by our questionnaire, which we would also like to discuss. It is the relationship between subject groups in Chapters and the Division which covers these subjects. It is our feeling that there **must** be a connection between these two units, especially for the coordination of projects being done by the Groups and by the Sections. If the Division has coordinating responsibility for a project of a Chapter Group, it should take at least partial financial responsibility for the project. We would not recommend an allotment by the Division to a Chapter Group, but would agree to financial help with a project, if the Chapter could not meet the need.

The mechanism of such a connection will be discussed in Part IV of this report, under the sub-heading Regional Representatives.

As for other projects, there is a definite feeling that the large Division is logically a coordinating group with the Section as the operating group. (VI-F). It might be better to have all projects undertaken by Sections, rather than by Committees of the Division.

D. Section Structure.

It is generally agreed that, because of the size of the Sci-Tech Division, there needs to be some smaller unit of organization to be the working unit. (V-6). These units we now call Sections.

There has been general discussion for at least two years of what Sections should exist, what they should be called, which are too large, and so forth. The results of our survey show that those members whose sections bring together librarians from libraries similar in size and content are happy with the present structure. The Pharmaceutical and Paper and Textile members are the best example of this.

On the other hand, members of other relatively small groups not united in interests because of size and content are not entirely satisfied with the present structure. Some members of the Petroleum and Public Utilities Sections have expressed their discontent. It is, therefore, no wonder that the "catch-all" Sections—Engineering and Chemistry—feel that the interests of their members are too diverse. It is this diversity of interest coupled with sheer number of members which seems to be the basic problem. A mechanism for dividing the Sci-Tech membership into groups with the same interests (size of library and content) will be discussed later. We prefer to call this organization by special interest rather than subject interest, because a single subject is not usually the most important of the factors these libraries have in common.

IV. Recommendations.

1. We recommend that the **Structure of the Association** as a whole be carefully studied by means of a survey of member opinions on that structure. The statistics gathered for the present study could be coordinated with a study of broader scope, and we suggest that this be done. The study of overall structure might well be directed toward establishing the interest of members in an association by special interest with regional as well as local structure.

2. We recommend that the Science-Technology Division set up its **Section membership** by special interest and size of library. These together might be termed type of library.

Sections might be called:

Aero-Space
Atomic and Nuclear Energy
Agricultural Chemistry
Chemical Industry (1-4 prof. librarians)
Chemical Industry (5 or more prof. libs.).
Building Materials.
Pharmaceutical Industry.
Paper and Textiles.
Petrochemical Industries.
Electronics and Communications Industries (possibly divided by size)
General Science and Technology (this latter for really unspecialized libraries covering all fields, as Univ. depts.).
Food Technology
Public Utilities
Rubber and Plastics
Geology and Mining (or Mining & Minerals)

Sections should be created and disbanded to meet current needs; functions would be to work on projects an to meet in regional conferences to discuss common interests of members. They should have a minimum of self-perpetuating activity.

3. We further recommend that the Division appoint **regional representatives** or committees of regional representatives whose primary function would be the organization of regional conferences. The regional representatives might well be Chairmen of Chapter Subject Groups in cases where such exist, or any members of any sections in areas where there are no Chapter Groups as such.

We envision a region as a group of Chapters or unaffiliated members in adjacent states and provinces, and as a point of departure for discussion have theorized that these might be organized as follows:

Maine	No. Car.
N. H.	So. Car.
Vt.	Ga.
Mass.	Fla.
Conn.	Ala.
R. I.	Tenn.
N. Y. (except NYC?)	Ky.
Quebec	No. Dak.
Ontario	So. Dak.
Ariz.	Minn.
N. M.	Iowa
Colo.	Kan.
Utah	Nebr.
S. W. Texas	Missouri
N. Y. C.	Manitoba
N. J.	Alaska
Pa.	Brit. Col.
Del.	Wash.
Md.	Oreg.
Wash., D. C.	Idaho
Va.	Mont.
W. Va.	Wyo.
Calif.	Sask.
Nev.	Alberta
Mich.	Okla.
Wis.	Ark.
Ill.	Texas
Ind.	La.
Ohio	Miss.

SPECIAL DIVISIONS UNOFFICIAL

We believe that a regional structure would be extremely beneficial to the whole Special Libraries Association, but we see no reason why the Sci-Tech Division couldn't adopt this plan for a trial period before recommending it for the consideration of the Association as a whole.

4. We recommend a definite connection between CHAPTER GROUPS and Divisions. As stated above the Chairman of the Chapter Group might also be the Division's Regional Representative. It is our feeling that there should be coordination of the projects undertaken in Chapter Groups and in Sections. The Divisions need not have any "power" over the Chapter Groups, but act in an advisory capacity for projects only. To limit Chapter Groups to anofficial connection with the Chapter only seems unfortunate.

5. REGIONAL CONFERENCES have been recommended by many members (VI-E) in their response to our survey. We heartily endorse this recommendation, and have considered the functions of a royal conference as distinct from those of an Association Convention, and have a proposal for implementing the recommendation.

Regional conferences should be scheduled at a time of year appropriate to the climate of the region involved, but not to conflict with SLA, ALA, or CLA.

Regional conferences should stress professional workshops directed to the subject interest or special interest of Section members in the region. We would hope, by special-interest orientation of such conferences, to get away from special interest orientation for National Conventions, leaving them for lectures and workshops on professional matters which cut across areas of special interest.

Regional Conferences might be of one or two days duration. The theme should be announced in advance, with papers solicited from members of the Section involved; adequate time for discussion periods and informal gatherings should be provided. Ideally the papers and some of the subsequent discussion should be published immediately thereafter with copies to all members of the Section in the Region and to Sci-Tech News or the Section's own publication if it has one. Sessions of various sections would be concurrent, but all sections might be covering the same topic (as, new reference tools).

Regional Conferences would have the obvious advantages of bringing useful programs to the librarians who cannot afford to travel far to a National Convention, while stimplating more members to participate through presentation of their papers to members with similar interests.

6. The information furnished about CONVENTION programs likes and dislikes is sufficient to be the subject of a detailed study at some future time, and this Committee recommends that such a study be made.

We do, however, have general recommendations based upon a study of the more obvious results of our survey.

We recommend that both regional conferences and national conventions be run on more of a professional level—eliminating greetings from the mayor, long resolutions of thanks and addresses by people outside the library and information fields on general topics adequately covered in newspapers and magazines.

We recommend the introduction of better programming by announcement of a general theme for each session and solicitation of short papers from the members and other information specialists, both well in advance.

We further recommend occasional use of the techniques of small discussion groups after the formal presentation of papers—these groups based on the size of library, and each led, perhaps, by one of the princi- discussion of a professional topic following its presentation cannot be overemphasized.

Business meetings are subject to some criticism, and should be kept as short as possible, possibly with more emphasis on the opening sessions of the Executive Board and Advisory Council for members who are interested in the workings of the Association.

Convention planning should leave at least one half day for informal meetings. This time could be found without lengthening the total convention time by scheduling optional tours on the last day only. In scheduling topics of professional interest, conflicts should be avoided whenever possible. This would not be as diffciult as it now is if subject-or-special-interest sessions were scheduled for regional conferences and omitted from the convention program n favor of topics which are of interest to many or all subject fields.

7. In conclusion, we find that many of the 670 members who responded to the questionnaire sent out by this Committee feel that there is room for improvement in some aspects of the Division's work—principally in the planning of convention programs, and the organization of its working units, the Sections. Many compliments were received on the content of Sci-Tech News, which seems to be the high point of service to members now rendered by the Division.

(EDITOR'S NOTE — Due to the length of this report, the main body of it is presented in this issue. Part II will be included in the Fall issue. The latter shows the statistics and comments from which the above conclusions were drawn.)

*Bloomshield, Angelica. The Division Liaison Officer looks at SLA Division Structure.

Special Libraries 44: 202-203, May-June 1953.

Committee of Five. It's our Association. Special Libraries 38:141-147, May-June 1947. Savord, Ruth. Seen from the Sidelines. Special Libraries 39:149-154, May-June 1948. Savord, Ruth. Structure and Interrelations of SLA Groups. Special Libraries 39:218-225, September 1948.

Special Libraries Association—Its First Fifty Years. N. Y., The Assn., 1959.

SCI-TECH NEWS REPORT, 1961

The best news for SCI-TECH NEWS has to do with finances: the Winter '60 issue cost $497.06, ads brought in $380.00 for a loss of $117.00. The Spring 61 issue cost $527.65 of which $17.20 is to be refunded and the amount of $500.00 was produced in ads for a loss of $10.00. As you can see we are edging over to the black and maybe . . .

The new copy deadlines are listed in the Masthead.

Miss Alice V. Neil has consented to continue Decument Digest, thanks to the efforts of the former editor, Les Poland. She has been encouraged to enlarge Doc Dig if she can find time. She has the best wishes of all of us. The list of compilers was omitted by my error and if you want to see me get a red face, just mention the subject.

All Chapter Presidents have been notified that I want to peek at their Bulletins which I scan for possible articles. Please send them to my house address rather than to North American Av. It is difficult to come up with editorials as good as the ones we have enjoyed for the last two years so no mention will be made of those present endeavors.

FRANK

ASTIA Coordinating Comm. Report

Dear Committee Member:

To bring you up-to-date on my correspondence with Heston Heald (you received a copy of my letter of March 13th, 1961, to him), I am enclosing a copy of letter dated March 23rd, 1961, which I received from Heston. I also wish to add that shortly after receipt of this communication I talked to him over the telephone to find out more about the bibliographic service mentioned in point 2 of the letter.

In actual fact, the print-out bibliography is still not available. The bibliographies as sent out by ASTIA are in exactly the same form (cataloging cards as before), and, as I understand it, only partially compiled by the computer.

A literature search in the proper meaning of this term is still not available, unless bibliographic service and literature search are considered synonymous terms, which, no doubt, they are not.

As to point 1, I was more-or-less unofficially aware of the fact that bidders were given document service, but I didn't realize that no special provisions had been made for the speed-up necessary for processing this type of request. For the regular procedure applicable to the contractor establishing a field of interest register with all its red tape and time required is certainly not appropriate for the certified bidder for a Government contract.

This is how things stand at this moment and I don't expect to make any further move until the San Francisco meeting, at which time the whole question of the Committee's work in the future will be discussed.

MICHEL O. FRIEDLANDER
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Annual Report Of Sci-Tech Awards Comm.

The committee consists of the chairman, the immediate past Division chairman of Sci-Tech, and a third member. It is desirable to keep the committee small because most of the transactions are handled by mail and by last-minute long distance telephone calls.

The committee was instrumental in having two articles prepared for the Winter issue of Sci-Tech News on the 1960 Sci-Tech Award winners. In the same issue a notice appeared asking the membership for suggestions for nominees for the 1961 SLA Hall of Fame and the SLA Professional Award, but **no** comments were received. The committee, however, on its own, presented to the Association two names for the 1961 SLA Professional Award.

A circular letter was sent to all Sci-Tech Division officers, committee and section chairmen, as well as Sci-Tech chapter representatives asking for suggestions for the Sci-Tech Award of Merit and the Publication Award, but only a few comments were received. A notice to the same effect was inserted in the Spring issue of Sci-Tech News but not a single suggestion was received from the membership at large. This may have been due to the fact that the Spring issue of Sci-Tech News came out quite late and the deadline set for receiving nominations was very close to the actual publication date.

The committee was considering to study the possibility of establishing more Sci-Tech Awards in the field of education and in other activities but the impression the chairman obtained from the SLA Awards Policy Committee at the Kansas City Advisory Council meeting was so discouraging that the plans were discontinued.

In the middle of April the committee began balloting and unanimously arrived at the following candidates:

The 1961 Award of Merit of Sci-Tech Division is to be given to Mrs. Nell Steckel Steinmetz, Librarian of the Pacific Aeronautical Library in Los Angeles, in recognition of her outstanding contribution to cooperative librariaship in scientific and technical fields.

The 1961 Publication Award is to be given to Miss Gertrude Bloomer of the William S. Merrell Company in Cincinnati, Ohio, for her untiring efforts and outstanding accomplishments in editing "Scientific Meetings" which became a world-wide reference tool, and to Miss Joan Hutchinson, Librarian of the National Lead Company in Cincinati, Ohio, in recognition of her untiring efforts and outstanding success in promoting "Scientific Meetings".

The award winners were notified by the chairman by a personal telephone call and letters were sent to the immediate superiors of the award winners and thus their companies were officially notified.

The awards are to be presented at the annual meeting in San Francisco either at the banquet or at another meeting. Time and place to be decided later.

Respectfully submitted,

CHARLES K. BAUER,
HELEN J. WALDRON
J. M. FERTIG, Chairman

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   Volume 2 — Sine, Cosine and Exponential Integrals of numbers 0-10 at 1/1,000 intervals to nine decimal places.
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PAPER & TEXTILE SECTION

The membership of the Paper & Textile Section stands at 106. A new directory of the Section, cross-indexed by company or organization affiliated, was compiled by Virginia Rankin, Membership Chairman, and distributed in May.

Three issues of the Section newsletter, PAPER CULLS and TEXTILE YARNS, were edited by Janet Hollander, S. J. Kees, and Alice Laubach. The newsletter was issued on a volunteer basis, and the editors assumed duplicating and postage costs.

Publicity Chairman Eva Winters has sent news items concerning Section activities to SCI-TECH NEWS, and SLA information and 1961 convention notices to six of the paper journals and three textile publications.

The Section Secretary, Louise Allen, has maintained the "Bright Idea" scrapbook, which was started several years ago. Work continued on the Section's union list of periodicals and the textile subject headings list under the chairmanship of Mary Emerson.

Anne Avakian has served as the Section's Local Divisional Representative and on the 1961 Convention Hospitality Committee. Program chairman Alice Laubach planned a luncheon and business meeting held in the Crown Zellerbach Building on May 29. The luncheon speaker, Eva Winter, discussed "Special Libraries and Technical Information East and West." A tour of the Crown Zellerbach Building followed the meeting.

Nominating Committee Chairman Fred Battle assummed the cost of balloting the Section for 1961-62 officers, so the Division allotment of 8c per Section member was not requested. Officers elected for the coming year were: Chairman, Alice Lauback; Vice-Chairman, Janet Hollander; Secretary, Katherine Glass.

Ann Howard, Chairman

SCIENTIFIC MEETINGS

Report of the Business Manager
May 11, 1961

Balance	$2,203.65
Total Subscriptions	536

JOAN HUTCHINSON

Special Libraries Council of Philadelphia and Vicinity

ANNUAL REPORT, 1960-1961

The Science-Technology Group of the Philadelphia Chapter, Special Libraries Association, continued an active program for the seventeenth year. The officers for the year 1960-1961 were:

Chairman — Olive F. Whitehead.
Vice-Chairman — Erick I. Hoegberg.
Secretary — Beverly Knower.
Treasurer — Virginia Erickson.

The first meeting arranged by the Science-Technology Group was a joint meeting of the SLA Metals Division, whose Fall Meeting was held in Philadelphia, and the Special Libraries Council of Philadelphia and Vicinity. The dinner and program were held on October 20, 1960 in the Engineers' Club of Philadelphia. The speaker was Dr. Norman Brown, Professor of Metallurgy at the University of Pennsylvania. He discussed "The Materials Science Program," which is sponsored by the Advanced Research Projects Agency (ARPA) of the United States Department of Defense to conduct research projects in the fields of solid state physics, structural and inorganic chemistry, ceramics and metallurgy.

At the second meeting, held February 8, 1961, Mr. Joseph H. Anderer, Manager of Applications Research and Development in the Technical and Textile Service Department, American Viscose Corporation, Marcus Hook, Pennsylvania, spoke on "Information Needs for Market Development". He pointed out that the introduction of new man-made fiber products is a very costly and complex gamble and that decision making in this field involves the evaluation of information from a variety of sources, including market surveys, literature sources, consumer surveys, etc.

The Patent Division Information Service, Textile Fibers Department, E. I. du Pont de Nemours & Company, Wilmington, Deleware invited the group to observe their information center and their procedure for handling company reports. One member of the Patent Division spoke on "Storage and Retrieval of Information from Company Reports via Computer Processing": and another, on "Generalized Computer Program for Information Retrieval". There were demonstration of the use of a document writer and an automatic typewriter for information processing. This program was followed by a dinner and business meeting.

Attendance at the fall and spring meetings was enthusiastic, the winter meeting was not well attended due to snow and hazardous traveling.

Last fall many members of the Science-Technology Group assisted the Metals Division in planning and conducting their Fall meeting, held in Philadelphia October 20-22, 1960. The Local Arrangements Committee and the Chairman and some of the workers at the SLC Booth at the Metals Show were selected from the local S-T Group.

Officers of the Group for 1961-62 will be:

Chairman: Erick Hoegberg, Head, Technical Information Group, American Viscose Corporation, Marcus Hook, Pa.

Vice-Chairman: Beverly M. Knower, Assistant Librarian; Sun Oil Company; Research and Development Library; Marcus Hook, Pa.

Secretary: Frances E. Parsons, Assistant Librarian; E. I. du Pont de Nemours and Company; Textile Fibers Department, Pioneering Research Library; Experimental Station, Bldg. 302; Wilmington 98, Delaware.

Treasurer: Virginia S. Erickson; 67 East Main Street; Morrestown, New Jersey.

OLIVE F. WHITEHEAD

ANNUAL REPORT
WASHINGTON CHAPTER FOR 1960-61

Officers
Mrs. Marguerite Ritchie — Chairman
Mr. Edwin J. Anderson — Vice Chairman
Mrs. Mary Martin — Secretary
Miss Virginia Whitney — Treasurer
Committee Chairmen
Miss Helen Kelly — Public Relations Chairman
Miss Clara Lou Kuehn — Publications Chairman
Miss Mildred Benton — Pro. Activities Chairman
Miss Renata Breisacher — Hospitality Chairman
Number of Members in Group
August 1960—165 May 1961—177
Increase—12
Financial Status—$102.41
Number of Meetings—4
Two dinner meetings with local speakers.
One dinner meeting at the Martin Company, Baltimore as the guest of the Baltimore Chapter and the Martin Company. An outstanding event!
One dinner and business meeting.

This year for the first time the Sci-Tech Group has attempted an industry liaison project as a professional activities program. Miss Benton, who is also a member of the Washington Placement Committee, has monitored the classified ads appearing in the two major Washington newspapers. Companies advertising for technical libraries are contacted and the services of the local SLA Placement Service are offered. This has been an educational experience for both parties to say the least. Salaries offered are low and organizations seeking librarians are often confused as to qualifications and experience and educational background desired.

I believe that this project is one which could be very well adopted on a national scale. It could have far reaching effects in both public relations and the raising of professional standards. I am recommending that it be continued next year as a Sci-Tech project.

MRS. MARGUERITE RITCHIE

BOSTON CHAPTER

Officers of the Boston Chapter Science-Technology Group this year were:

Barbara Spence — Chairman.
Emery Wescott — Vice-Chairman, Chairman-Elect.
Barbara Hill — Secretary-Treasurer.

The Group held four meetings, with an average of sixty members and guests. The first meeting was a round-table discussion of library problems.

At the second meeting Mary A. Granese, Assistant Director of MIT Lincoln Laboratory Library, described in detail the microfilming-microcarding of the documents collection at Lincoln Laboratory, outlining the problems as well as the benefits of the project.

At the third meeting, Mr. M. H. Bishop, Senior Specification Writer at Avco Corporation's Research and Advanced Development Division, discussed problems involved in the procurement and dissemination of specifications and standards, and offered suggestions and aids to librarians who must handle specifications.

At the final meeting of the year, the Group welcomed Miss Alberta L. Brown, who spoke on the SLA Translation Center, its potential and development. Miss Brown outlined the Translation Center Survey presently in progress, and made us aware of the role we can all play in the development of the Translation Center.

It is expected that the revised Union List of Serial Holdings in Industrial Libraries in the Boston Area will be mailed to members before the first meeting next fall.

The Group's series of lecture-discussions for beginning librarians, held in the Spring of 1960 and again in the Fall, 1960 (and reported in more detail in this chairman's Mid-Winter Report, January 1961) were enthusiastically received. The project proved to be very successful, and elicited wide-spread interest. At the Group's business meeting it was decided to use the funds realized from registration fees from the lecture-discussion series ($342.47) to underwrite an educational program for members, to be a workshop program on a subject to be chosen at a later date.

Officers elected for 1961-62 are:

Emery Wescott — Chairman
Elizabeth Weeks—Vice Chairman, Chairman-Elect
Esther Usher — Secretary-Treasurer.

Barbara A. Spence, Chairman

ANNUAL REPORT OF THE ARCHIVIST, 1960-1961

Work has been continued during the year on revision of the Sci-Tech Archives at Headquarters. A quantity of non-permanent commespondence has been removed from the files. The contents now conforms generally with the recommendations made by Genevieve Ford in her memo of August 1960 addressed to Chapter and Division Archives Chairmen.

This work is presently almost complete.

Florence W. Turnbull,
Archivist,
Science-Technology Division

NOTICES

Special Libraries Association has just issued **Guide to Metallurgical Information: SLA Bibliography No. 3,** a new reference volume that will prove invaluable to librarians and researchers.

Describing more than 600 books, journals and other information sources in the field of metallurgy, it is the only bibliographical searching tool of its type. SLA, $4.00.

New York Chapter, Special Libraries Association
Summary Report, 1960-61

MEMBERSHIP

Sci-Tech's membership numbers 375, an increase over last year's 347.

GROUP OFFICERS, 1960-61

Chairman — Mary W. Covington, Union Carbide Ore Company.
Vice-Chairman — S. Kirk Cabeen, Ford Instrument Company.
Secretary — Carmela Barbone, Bell Telephone Laboratories, Inc.
Treasurer — Lee Traven, Socony Mobil Oil Company.
Immediate Past Chairman — Frances M. Stratton, American Cyanamid Company.

GROUP COMMITTEE CHAIRMEN, 1960-61

Arrangements — Jeannine Salvo, American Cyanamid Company.
By-Laws — Gordon Randall, IBM Corporation.
Finance — Robert Brooks, American Gas Asso.
Hospitality — Elizabeth Sullivan, Pepsi-Cola Co.
Membership — Muriel Carabba, Chas. Pfizer & Co.
Nominating — Ray Struglia, Consumers Union of U. S. Inc.
Planning — S. Kirk Cabeen — Ford Instrument Company.
Program — James Ramer, Engineering Library, Columbia University.
Public Relations — Mrs. Marilyn Davis, McGraw-Hill Publishing Co.
Science and Technology Resources in New York — James Ramer, Engineering Library, Columbia University.
Business Manager for the Russian Textbook — Lee Traven, Socony Mobil Oil Co.

INCOMING OFFICERS, 1961-62

Chairman — S. Kirk Cabeen.
Vice-Chairman and Chairman-Elect — Lee Traven.
Secretary — Mary Ruth Bateman.
Treasurer — Robert M. Brooks.

Mary W. Covington, Chairman

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